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Motorcyclist

JUNE 1979

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How To Stop Them

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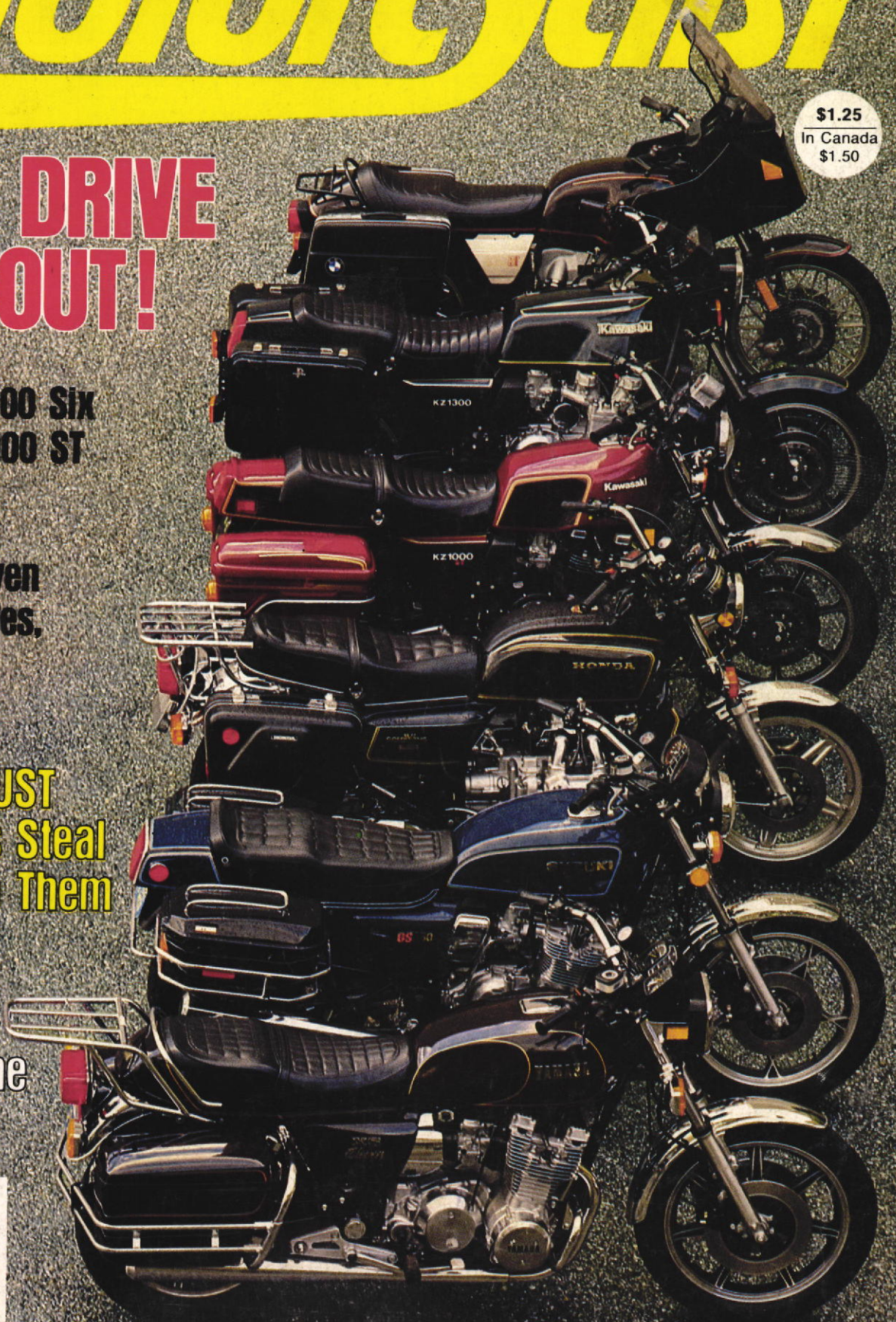

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THERE'S MO
THAN MEET

There's K91 Mark II, the big footprint, big muscle, big mileage tire that keeps on cruising under heavy loads.

Dunlop developed the K91 Mark II high performance touring tire for any type of road and any type of weather.

The K91 Mark II that powers your bike is the first and only touring tire with belted construction. Two Kevlar™ belts that are pound-for-pound five times stronger than steel, help keep the tread stable when you're flat out on a freeway. Flexible nylon body plies under the belts help absorb the shock of ever-changing open road conditions.

Performance - a part of the design. Thanks to its belted construction and high air volume, the K91 Mark II's load-carrying capacity is second to none. Take the MT90-17 rear, for example. At 40/psi, it's rated at 810 lbs., 140 lbs. more than the stock 450-17.

When cruising along sloppy highways, three exclusive design features - aqua jets, grip cells and center groove - attack the wet surface, discharging water as you lay down tread. In a recent independent test among competitive tire brands, this same unique tread design and high traction compound helped the K91 Mark II panic stop in the shortest distance and with excellent braking control.*

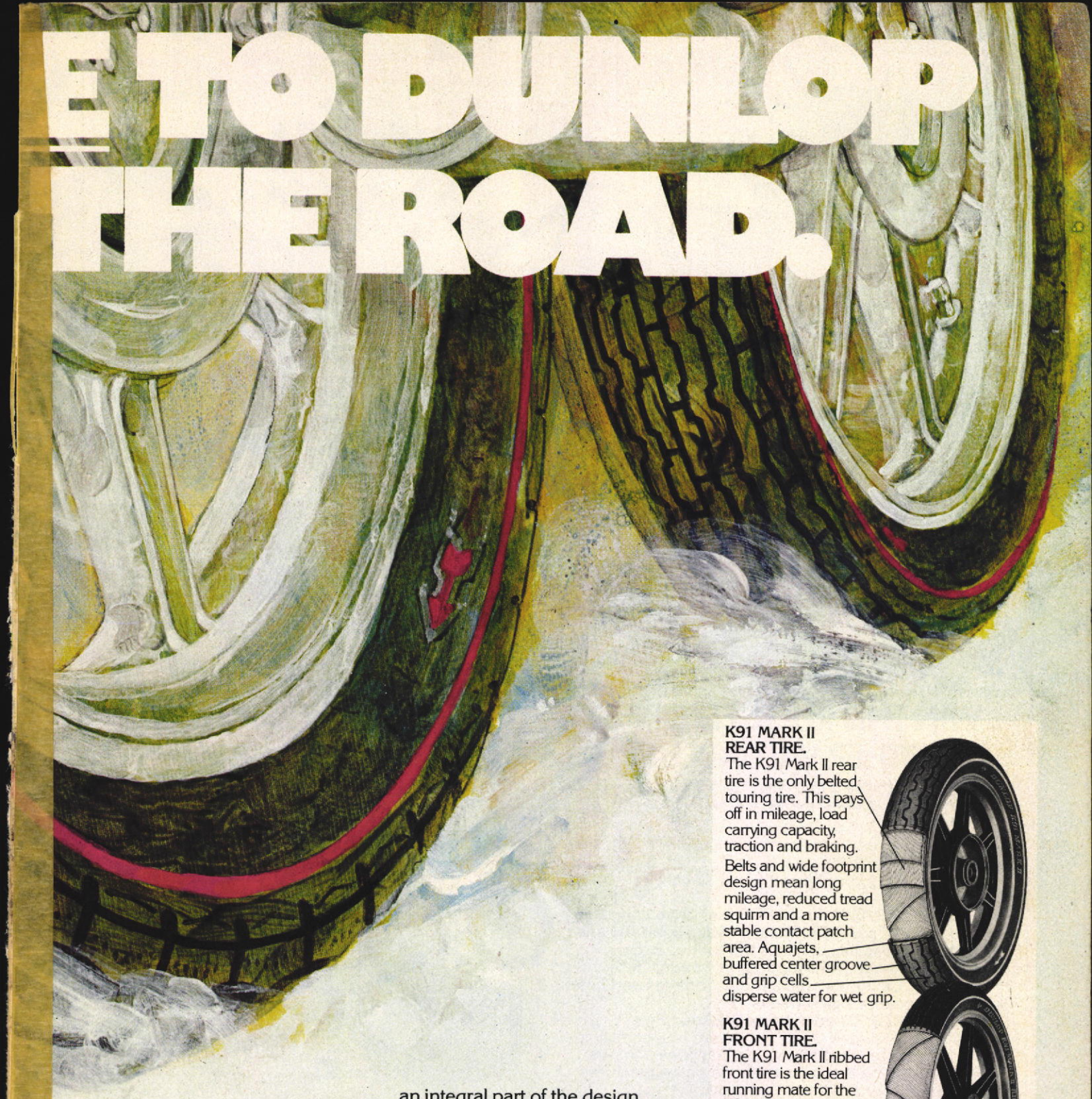
And the payoff is in mileage. The belted K91 Mark II consistently delivers longer mileage than bias ply tires. In fact, up to three times longer than some stock tires.

*Write for details.

An ideal partner. The K91 Mark II ribbed front tire.
You'll get the maximum benefit out of the K91 Mark II rear tire when your bike is fitted with a K91 Mark II ribbed front tire. The semi-ribbed design and non-interrupted center groove combine to give overall straight-ahead steering, stopping and

More cycles ride on Dunlop tha

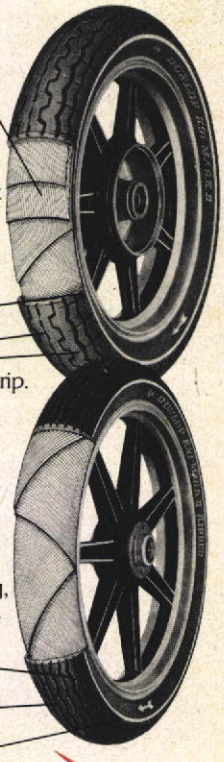
E TO DUNLOP
THE ROAD.



K91 MARK II REAR TIRE.
The K91 Mark II rear tire is the only belted touring tire. This pays off in mileage, load carrying capacity, traction and braking.

Belts and wide footprint design mean long mileage, reduced tread squirm and a more stable contact patch area. Aquajets, buffered center groove and grip cells disperse water for wet grip.

K91 MARK II FRONT TIRE.
The K91 Mark II ribbed front tire is the ideal running mate for the K91 Mark II rear tire. With a complementary tread design for steering, stopping and cornering.



cornering in wet or dry conditions. And both front and rear K91 Mark II's fit tubeless or tube-type wheels.

So, for the ride of your life, look for the red arrows of the Dunlop K91 Mark II front and rear tire package. With more features as an integral part of the design, they're made for each other... and for the high-performance super-bikes of today.

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Imagine the fun you'll have getting away from it all in your tough 1979 Toyota 4WD Long Bed "Yamahauler" truck, carrying your three rugged Yamaha off-road bikes!

1ST PRIZE: 1979 Toyota 4-Wheel Drive Long Bed "Yamahauler" truck with Yamaha MX175, MX100 and GTMX off-road bikes. Plus a trip for two to the $500,000 Toyota/AMA Supercross Series in Anaheim, California, with air transportation and hotel accommodations provided.

2ND PRIZE: Three Yamaha Off-Road Bikes—MX175, MX100 and GTMX, these are tough, reliable off-road playbikes that just about anyone can ride. And they come loaded with all the proven features they need to make them Yamahas.

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5TH PRIZE: 1,000 winners will receive a "Yamahauler" decal.

Enter today! Get prize details and entry blanks at participating Toyota and Yamaha Dealers and send to: Get Away From It All Sweepstakes, P.O. Box 6686, Chicago, ILL 60677. Winners will be determined in a random drawing August 31, 1979 from all entries received no later than midnight, August 15, 1979. Licensed drivers only. No purchase necessary. Void where prohibited. Sweepstakes closes August 15, 1979.

YOU GOT IT.
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YAMAHA
When you know how they're built.

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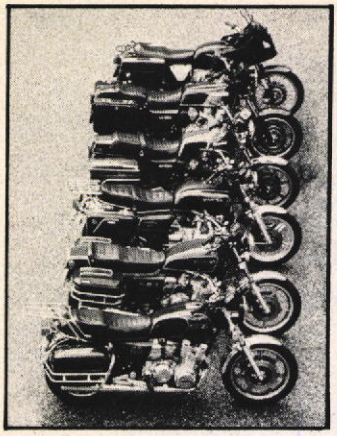

COVER

These six shafties zipped from L.A. to Daytona and back trouble free, without incident. But performance differences made some work better than others along the vast Interstates. Details of the bikes' strong points and weak points begin on page 24. Photography: Pat Brollier.

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Motorcyclist Magazine

PUBLISHED MONTHLY NUMBER 984

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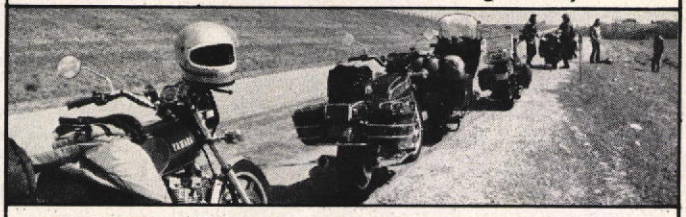

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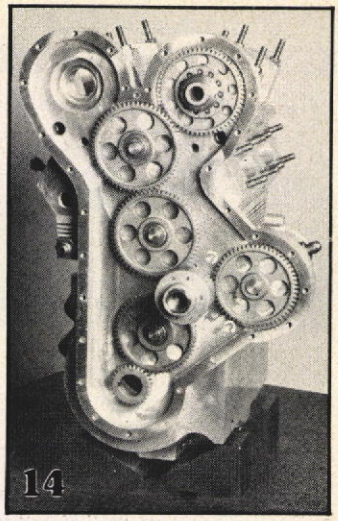

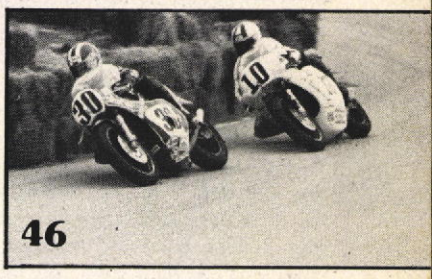

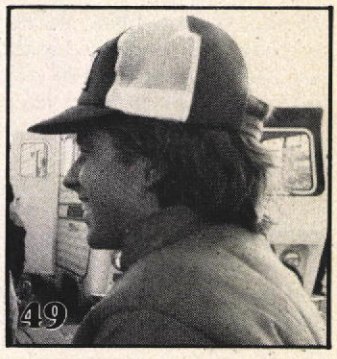

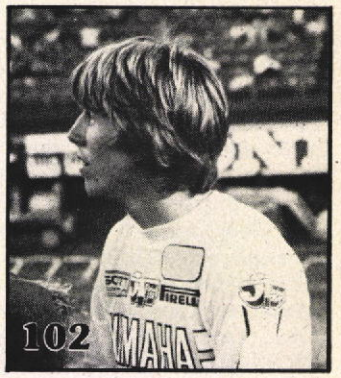

MOTORCYCLIST (ISSN 0027-2205)

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Published monthly by Petersen Publishing Company, 8490 Sunset Boulevard, Los Angeles, CA 90069. Subscription inquiries phone (213) 657-5100. Second-class postage paid at Los Angeles, California and at additional mailing offices. Single copy $1.25. Subscription rates: U.S., Military, Possessions one year $9.00, two years $16.00 Canada and other countries one year $12.00, two years $22.00

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Editorial

"A"

☐ Ask the general public to comment on motorcycles and you'll likely hear the same old thing: black leather jackets, hooliganism, hell's angels, rowdies, outlaws and noise makers. It's true. To most people we're still the ruffians who tear up towns and rape nuns. We venerate beards and tattoos and measure fashion by how much grease soils the Levis or rims the fingernails. The public thinks our hulking bikes are too fast, too noisy, shouldn't be allowed to go between cars or park in convenient places. Our dress is crude, our brains fried and our women are vile clap traps totally lacking in self-respect or morals. Don't laugh. That image, or one slightly less intense but of the same mold, is still around in 1979. It is our Scarlet Letter, blazing prominently in every encounter with society or government. Some say this image is why we get stepped on at every turn. I say balderdash. Our lack of organization and unity is why we're tossed around with disrespect, not because of a tarnished image.

What do you think of homosexuals? Limp-wristed guys who hold hands and kiss each other. Pansies scared of girls and desirous of small boys. Most people can't even think about the final sexual expression between two men, yet this group, persecuted for years, maligned, ridiculed, teased, even hated, has, *through organization*, risen above far greater stigmas than have ever plagued motorcycling to become a strong political force. The public's image of homosexuals is still quite negative, and always will be, just as the bikers' image always will be, but this hasn't stopped them from organizing efficiently to gain political clout, which today is an absolute necessity for survival.

Here is an example of their influence and power. Recently at a black-tie $100-a-plate dinner in Los Angeles dozens of politicians, movie stars and millionaires mingled with a well-organized group of political contributors. The contributors, for the most part, were homosexuals raising money for various political campaigns sympathetic to human rights issues, especially gay rights. This single dinner collected $45,000 for Los Angeles area candidates alone, more than any motorcycle group has ever donated to anything. Sponsors for the dinner included Governor Jerry Brown, U.S. Senator Alan Cranston, Los Angeles Mayor Tom Bradley, ten U.S. Congressmen, 20 state legislators, nine L.A. City Council members and the National Democratic Finance Chairman. Actor Burt Lancaster was the master of ceremonies. I have never heard of a motorcycle function even aimed at such a group, let alone actually attracting it.

Political organization has brought homosexuals from a position of secrecy and disgrace to one of national power. Here are some good reasons why motorcyclists must rally to achieve the same thing. EPA proposed noise regulations are expected to cost the industry $224 million per year. Michigan's Department of Natural Resources intends to prohibit all competitive trail events on holiday weekends. The Board of Aldermen of the City of St. Louis have banned motorcycles from city parks. Secretary of Agriculture Bob Bergland has recommended as part of the Rare II program that 15 million acres of public lands be closed to motorized recreation. President Carter's energy conservation proposals include reduced allotments of gasoline to motorcycles under rationing, and the possible closing of gas stations on weekends, which would effectively end dirt riding as we know it today.

Money is the mother's milk of politics, and unless we generate some for the politicians we'll continue to be bullied and ignored. What can you do? Find or form groups such as the California Motorcyclists Political Action Committee to specialize in local influence. Nationally you can support the AMA, which desperately needs members and donations. And write your government officials relentlessly, which in itself implies a veil of organization. Send for the AMA's $2 booklet, *How To Communicate With Government*, and live by it.

Remember, there are three types of people: those who make things happen, those who watch things happen and those who wonder what happened. If gays can unite to build effective political influence, so can the 20 million motorcyclists in America. Let's not wonder what happened.—**Dale Boller**

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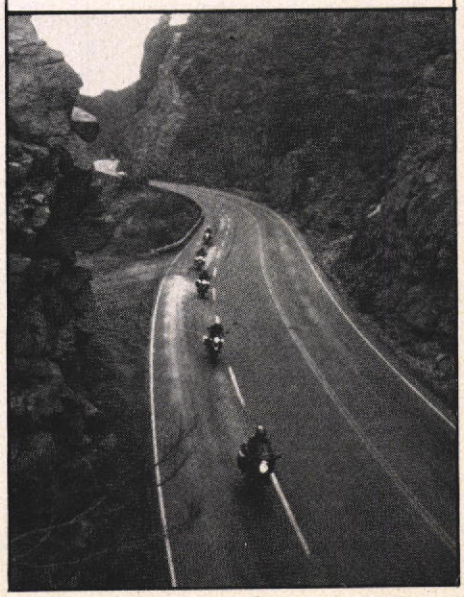

Man does not live by trophies alone.

That's why winning on a new Honda XR can win you a $100 gift certificate.

GIFT CERTIFICATE
$100
HONDA XR SERIES AWARDS
TO THE DEALER
Your open account will be credited one hundred dollars ($100.00) upon presentation of this completed XR Series Awards Certificate to American Honda Motor Co., Inc., Motorcycle Sales Department, 100 West Alondra Blvd., Gardena, CA 90247. Attention: XR Series Awards, by February 28, 1980.
XR 344
Redeemable for one hundred dollars ($100.00) in merchandise at any participating Honda motorcycle dealership in the United States.
Expires January 31, 1980
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Vice-President, Motorcycle Sales Division
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HUNDRED
HONDA

When you invest as much skill and sweat as it takes to win an off-road event, we figure you deserve something more than just a trophy. That's where our new $100 Series Awards come in.

It starts with three dynamite new four-stroke dirt bikes—the XR185, XR250 and XR500. Lean, mean and enduro-ready right off the showroom floor.

And it winds up with you taking a $100 shopping trip—on us—at your participating Honda dealer.

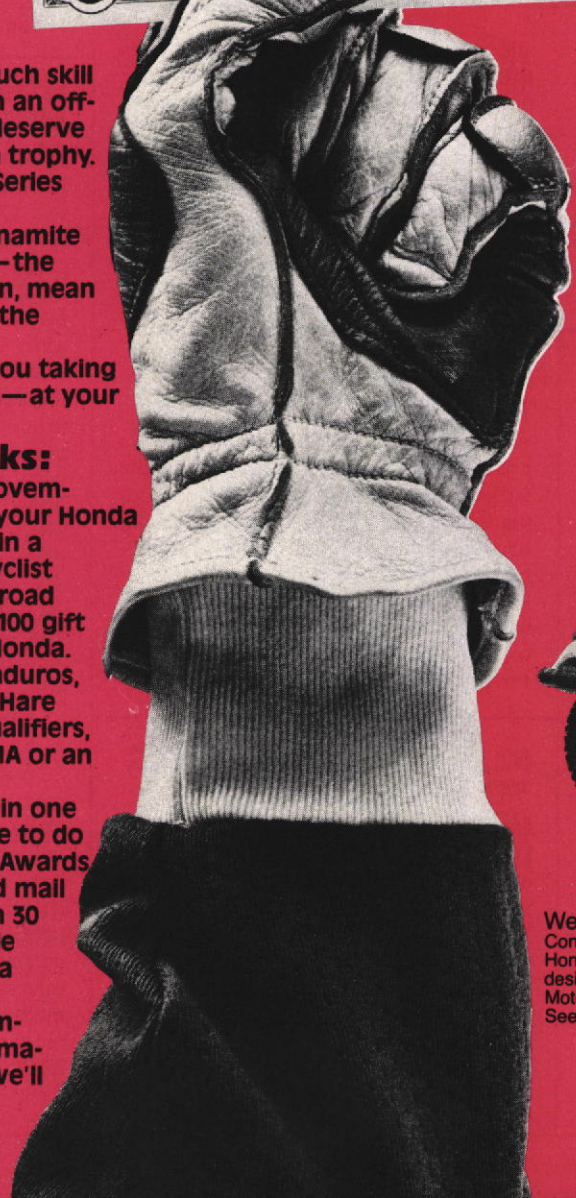
Here's how it works:

Between April 1 and November 30, 1979, when you ride your Honda XR to a class or overall win in a specified American Motorcyclist Association-sanctioned off-road event you're eligible for a $100 gift certificate from American Honda.

Events included are Enduros, Scrambles, Hare Scrambles, Hare and Hound and Two-Day Qualifiers, sanctioned either by the AMA or an AMA-affiliated club.

When you score a win in one of these events, all you have to do is fill out a Honda XR Series Awards Rider Registration Form and mail it to American Honda within 30 days. The forms are available through participating Honda dealers, or by writing to us.

Once we have your completed form and AMA confirmation of the event's results, we'll mail you your $100 Awards Certificate.

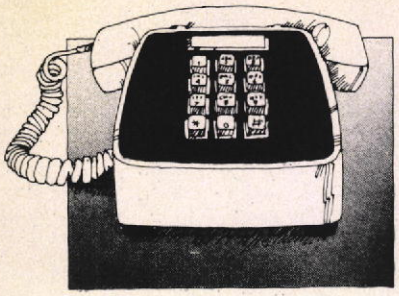


So if you want your weekends to pay off with more than trophies, we've got you covered. With the hottest new line of four-stroke enduro bikes going. And with a program that'll help make them even more rewarding to ride.

For rules and regulations, see your participating Honda dealer. He'll show you the new XRs. And fill you in on how to get the goods—on us.

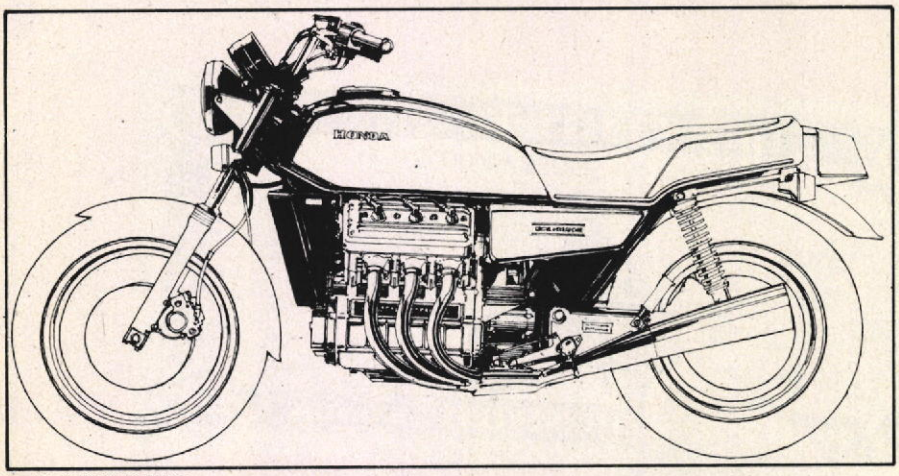
Wear a helmet and eye protection when riding.
Contingency offer not open to Team Honda or American Honda-supported riders. Void where prohibited by law. XRs designed for off-road, operator use only. Write: American Honda Motor Co., Inc., Dept. M69XRC, Box 50, Gardena, CA 90247. See Yellow Pages for nearest Honda dealer. © 1979 AHM.

HONDA
GOING STRONG!



HotLine

FIRST VIEW OF HONDA V12?



Drawing by Kimitoshi Honma

A chimera, a blue-sky sketch or a pre-production design drawing? Take your pick. Anyway, it's got Honda on the tank and six cylinders cranked up into a vee. It comes by jet courier fresh from Japan, exclusively for *Motorcyclist*. Eyeballing the drawing, we notice the lower end appears a lot like that of the CX500, and there appear to be push-rod tubes (pushrods on a Honda? We still wag our heads over that) between the exhaust manifold, and a rearset gear changer. Frame would appear to be a diamond type, a la CBX, with the engine acting as an integral load bearing member. Don't expect to see this baby at your local Honda dealer next week, or perhaps even next year, but if the Feds and the Arabs don't do us in, perhaps we'll see it not long after that.

HONDA BANNED

The American Motorcyclist Association has announced that the 977cc Honda racing engine will not be legal for Superbike roadracing class competition. The racing engine, based on the new four-cylinder DOHC 750cc Honda road machines, has special crankcases, cylinders, head, cams, carbs, clutch, transmission, dry sump, connecting rods, pistons, crankshaft, valves, magnesium parts, etc. The changes were sufficient to produce in excess of 100 horsepower, but they decided there were too many changes. The rules call for motorcycles based on production street machines available to the general public, EPA legal at the time of sale and restricted to certain changes. Some of the 977's racing parts which are permitted within the rules may ultimately be sold to competitors for use on existing engines.

Although the ban will probably disappoint some Honda enthusiasts who attend AMA roadraces this year, we think that it will ultimately make Superbike racing fairer and more competitive.

MIKKOLA HEALS IN TIME FOR CARLSBAD

World 500cc MX champ Heikki Mikkola twisted his knee recently but Yamaha factory spokesmen say he will be fit for the season opener in Austria and fully back on form for the USGP at Carlsbad, California on June 10. Mikkola is defending his title against Brad Lackey, who finished second last year and is expected to be the champ's major threat in 1979.

82,000 ENTER CONTEST TO NAME THE SPORTSTER

Dave Young of Raytown, Missouri won a 1979 XLS Sportster and a trip for two to Daytona for naming the new XLS in a giant Harley-Davidson contest which produced 81,979 entries. His suggestion of the winning name, ROADSTER, was submitted by almost 100 contestants, but his card came out of a drawing used to break the mass deadlock.

OFF-ROAD RIDERS SPEND MILLIONS IN MEXICO

An AMA study indicates that American dirt riders are spending $22.5 million per year in Mexico because of the vast open riding areas there. This loss to our economy comes from riders spending money on lodging, food, gas and entertainment while in Mexico escaping U.S. off-road restrictions. Said the AMA's Ed Youngblood, "As we completed this study, we were shocked by the magnitude of economic impact of dollars taken to Mexico by recreational motorcyclists. And these users delivered a very clear message that it is happening because the Bureau of Land Management is making it more and more difficult for Americans to pursue their recreational interests on their own public land."

Recently Francisco Santana Peralta, mayor of Mexicali, B.C., Mexico, was honored as "Man of the Year" by SCORE International, a 10,000-member off-road racing organization. SCORE headquarters are located in Westlake Village, about 40 miles from the six-million-acre California desert.

HONDA GP RACER MIGHT HAVE 48 VALVES

Honda's going to race four-strokes in the GP circuses again. The last time they did that, two decades ago, they stood the motorcycling elite of Europe on their collective ears by running four, five and even six-cylinder motorcycles with twin overhead cams poking four valves per cylinder—outrageous technological overkill which is now ho-hum production hardware. So, the question arises, how can Honda hope to compete with the super-refined two-strokes using the same old technology developed in the early Sixties? The answer: they're not. The new Grand Prix Hondas will be four-strokes, but there the resemblance to the old RC bikes ends. The new Honda GPs yodel along at 22 grand plus, and, we have heard, have pistons which are not circular in cross-section: the cylinders are no longer cylindrical. Why? Well, apparently it has to do with how many little holes (valves) you can fill an elipse with over how many you can fill a circle with; you can put more valves in an elipsoid cylinder head than you can a conventional circular design. How many? Try eight. That's right, eight valves per cylinder. An engine with six cylinders would have 48 valves. Little tiny valves with about as much reciprocating weight as a mumeson. That's where they get the 22,000 sustainable, reliable rpm from. Or so we hear.

BACKWARD BIKE GETS GOLDEN FLEECE AWARD

Senator William Proxmire of Wisconsin recently named the NHTSA as recipient of his monthly Golden Fleece award which dishonors government agencies for wasteful spending of public funds. Joan Claybrook and NHTSA spent the incredible sum of $120,126 to build a ridiculous backward steering motorcycle that no one could ride—all in the interest of safety. Proxmire said, "The bureaucrats gave the taxpayers a bum steer on this one."

GIANT CONTEST TO GIVE AWAY FIVE NEW SUPERBIKES

Motorcyclist doesn't mess around. When we decided to have a blockbuster sweepstakes giveaway later this summer, we didn't even consider 125s, 400s or even 750s. We went straight to the top-of-the-line model from the five biggest selling brands in America. The prizes will be a Harley Sportster, Honda CBX, Yamaha XS Eleven, Kawasaki KZ1300 and a Suzuki GS1000, plus dozens of accessories for runners-up. Watch *Motorcyclist* for complete contest details and be a winner.

CANNONBALLING SUZUKI

Besides winning our giant touring comparison found elsewhere in this issue, it seems that Suzuki's GS850 makes a pretty respectable WFO blitzer, also. In the recent Cannonball Baker Sea to Shining Sea Memorial Trophy Dash, Suzuki of Terre Haute entered a basically stock 850 that had only 600 break-in miles at the start of the event in Darien, Connecticut. With only a week of preparation before the highly un-sanctioned event, the GS was hastily fitted with electronic ignition, a quarter fairing, fuzzbuster, and a tail-section-mounted fuel cell that extended the bike's range to as much as 350 miles.

For the first time in Cannonball history, pony-expressing was allowed, so the Suzuki was piloted by five different riders, who switched at approximately 650-mile intervals. During the course of the 42-hour trek, temperatures dipped as low as 14 degrees, and 1800 miles were in rain. One rider received a police escort through Arkansas and Oklahoma, and another rider was clocked at 112 mph, and spent a wallet-lightening 45 minutes getting back on the road.

At press-time the 850's exact placing at the finish wasn't known, but the team was said to have made a "strong finish" against a field of exotic cars.

The TOP TUBES for Yamaha, Kawasaki, Suzuki, Honda, Triumph, BSA, Harley, BMW . . . 2into1; 3into1; 4into1; 6into2; 4into2; 4into1.
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What made Mike Miller leave his wife and warm bed at 3am?

The New KZ1300.

Coming soon. Kawasaki believes in riding safely. Check local laws before you ride. Member of AMA, MIC and MSF.

Some folks might say he wanted an early start. But they would be wrong. The truth is Mike heard the Kawasaki calling him that morning.

"Mike," said the KZ1300, "let's hit it." How could anybody say no to a bike like this?

Six cylinders of liquid-cooled power begging to get somewhere fast. The farther the better. Hot weather and stop-and-go city riding is no sweat, either. Engine temperature is thermostatically controlled.

The KZ1300 is what you always dreamed a touring bike could be. With shaft drive, there's no chain to adjust and oil. Power comes on smooth and clean, with no loss due to emission controls. Our engineers have seen to that.

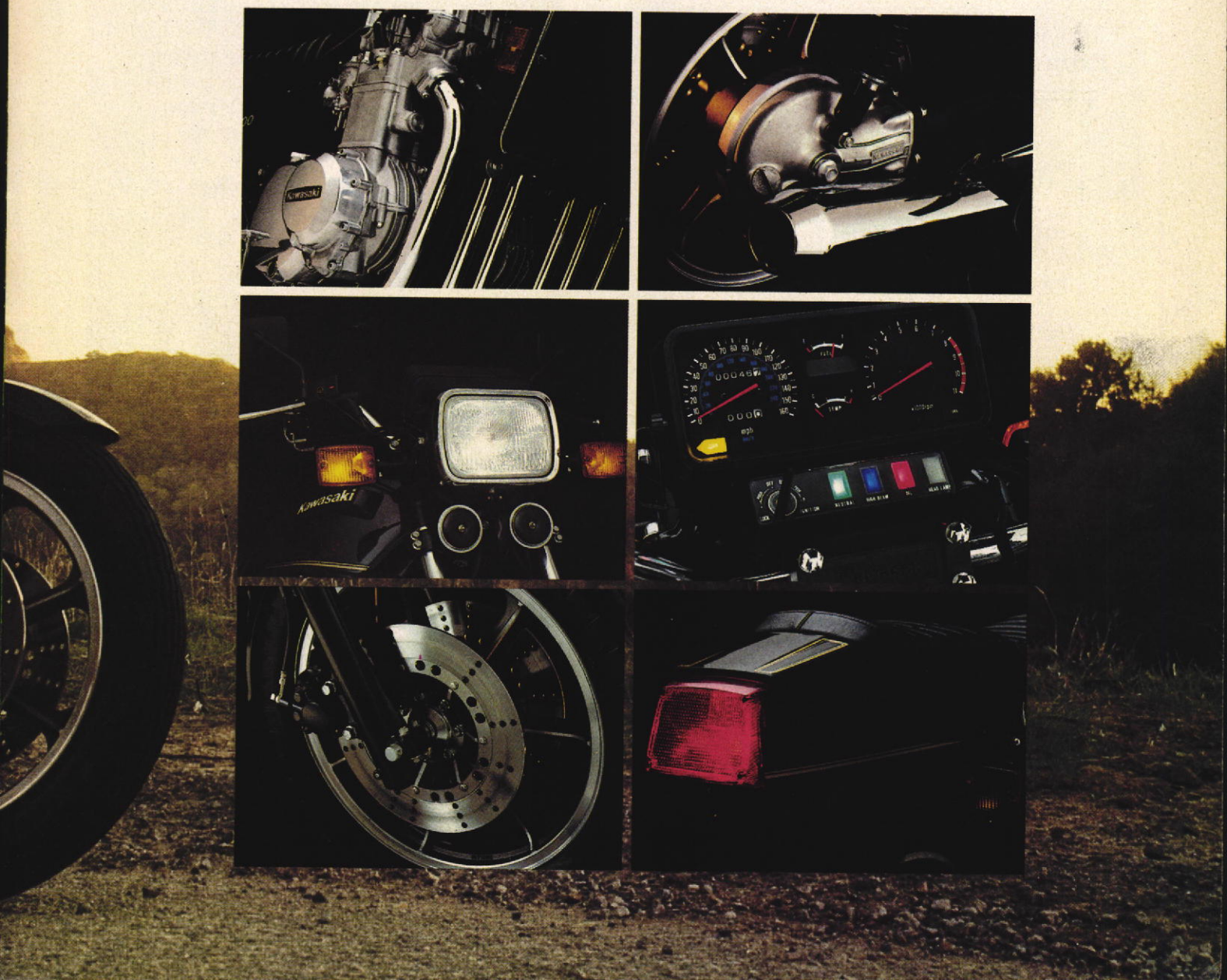
Breakerless transistorized ignition puts an end to points. You get a steady, reliable spark. And the KZ1300 runs on regular gas. A blessing at today's gas prices.

Whatever you leave behind, you're going to be right at home on the road. With good time features like a quartz halogen headlight, dual horns and full instrumentation. And a built-in anti-theft device to foil the creeps.

Whatever you tell your wife is between the two of you.

Kawasaki

Don't let the good times pass you by.



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We put in not one but two amino functional silicones. Silicones that are regarded as the most advanced shine and durability agents in the automotive industry.

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$2.00 Refund Offer. Look for special refund offer on TURTLE EXTRA car wax packages. In liquid or new soft paste.

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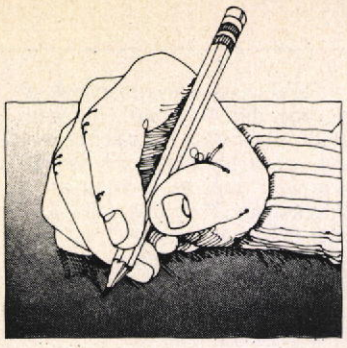


Letters

DIGGING THE BIG 4

Your article "Inside the Big 4" in the March issue covering Honda, Yamaha, Suzuki and Kawasaki was very interesting and most informative. I love journalism such as this that "digs" into the real background of big corporate companies to tell us what's really going on over "there."

Officer D. Grindstaff
Fulton Police Dept.
Fulton, MO

In 15 years of reading motorcycle mags, I've never been moved to write a letter—your article "Inside the Big 4" changed that. I'm not a man of words but I want you to know that you gave me some insight into the Japanese mind, a few bellylaughs over reactions to your well-selected questions and, in general, a very, very rewarding reading experience.

Bill Mekeel
Rockville Centre, NY

SPECIAL LADY

Thank you so much for your February 1979 issue with a woman on that beautiful eleven-hundred Yamaha Special. I have ordered one myself and it should be here the end of next week. Thank you again for including us ladies—hope to see more of it.

Ms. Barbara Davison

SPIRIT PATROL

I love Ed Clark's super-trick Z-1. We need more policemen with his spirit.

Ted Drinkwater
Milford, ME

MORE QUESTIONS FOR JOHN DAVIDSON

I thoroughly enjoyed your interview with John Davidson in March, and feel that Mr. Davidson stood up well under your battery of questions concerning the issue of "dumping" by the Japanese bike makers. But there's one question I wish somebody would ask those people down at Harley-Davidson, and that is, why doesn't Harley manufacture a street version of their competition 750cc bike? It seems to me that if Harley produced that 750 and priced it comparable to the Japanese 750s (of course allowing for a very small percentage increase over that price because it is a *Harley),* they could take a good size portion of that mid-size bike market away from the Japanese makers. Come on Willie "G," where's that competitive spirit?

Glen Davis
Napa, CA

Harley's attitude seems to me to say, "If you don't like what we are selling, go elsewhere." And the American riders have, to the tune of 60 percent of the market. The Harley image, its mystique, is being relied upon entirely. For those who buy Harley, great, to each his own, however, there is a whole world of motorcycle development going on that the rest of the bike-riding community is tuned into.

I personally do not wish to spend my dollars on foreign-made products when we need those dollars so badly at home. But . . .

The cycle market demands, and is given, via magazine testing, information on handling, braking, acceleration, quality and price. These road tests tell it like it is! You can't bank a mystique around a corner, pass a tractor trailer with two-up on image, this requires those elements that cycle magazines test for. Brakes, handling, acceleration, price. These attributes have sold me eight Japanese bikes. Each new bike was an advance to match increased experience and an increase in new technology. The Japanese stimulate new sales by their model changes and innovative ideas. They are actively seeking new cycle markets, they want to know what we want! They are not content to hide behind past fame with "macho" advertising and no real advances.

Harley, The Cadillac of Bikes??? Try out a Yamaha 1100 . . . . Too bad the Harley logo is not on the Yamaha . . . .

Buzz Coplen
Beaverton, OR

BIKES VS. LIZARDS

The nation reaps a harvest of jobs and taxes from the recreational usage of the Western wastelands. This is a profitable cash crop from land which was, until recently, worthless, unless you were a rattlesnake. The cost—a few overturned rocks, uprooted weeds and the death of a Sierra Club pet lizard two weeks before his time. Also while intently studying the sex life of a desert cactus, one Washington expert received a knobby tire track across his bottom. The vast American Desert is the result of natural erosion, it cannot be created or destroyed by man; a motorcycle, or a whole pack of motorcycles, do less damage in a year than a day of steady rain.

One special interest group may be able to deny public enjoyment of this beautiful, worthless land. The plan is to limit the public land to those few that can afford a helicopter, or those willing to cohabit with a jackass.

Cecil Wise
Amarillo, TX

LOOPHOLE

The majority of the motorcycles in the United States are only operated seasonally because of the severe weather in much of the country, and most riders (with the exception of a relatively small corps of touring buffs) do not exceed five or six thousand miles per year, if that much. In other words, they are used only for fair weather recreation by most owners.

Consequently, it is my personal opinion that flatulence probably contributes more to air pollution than motorcycles ever will. I believe that an examination of the registration statistics would indicate that California alone is the only state that could conceivably benefit from emission controlled motorcycle engines. The reasonable answer obviously would have been a modified engine for California, and to spare the rest of us the decreased longevity and stumbling running of these leanly jetted motors.

Fortunately, most of the mischief has been done by the simple expedient of altering the length and taper of the slide needles. The jets remain unchanged. In the case of my 1978 Yamaha 650, I simply installed the 1977 needles. It appears that one can apply this remedy to any machine which has ancestral origins prior to 1978. As to my 1978 XS-1100 newborn this year, the solution was to order the needles from England, where the engines are marketed unmodified.

Readers should be aware that Federal law, though unenforced, does prohibit dealers from making these modifications. However, the law does not, in fact, impose any sanctions on individual owners who may adjust their engines. Rather, conformity is monitored by the States. Presently, California is the only state that is actively performing this function. New Jersey does make a perfunctory check of emissions at idle speed only, but does not examine equipment or check overall effectiveness. In any event, since the modification is internal, there is no handy way for Joan to detect this heinous crime, should it be committed.

Al Peirson
Marlton, NJ

Readers' inquiries are invited for this column. Unfortunately, no personal replies can be made to letters. MOTORCYCLIST will publish as many letters and responses as space permits. Mail letters to LETTERS, MOTORCYCLIST Magazine, 8490 Sunset Blvd., Los Angeles, California 90069.

NHTSA Calls Us The Dregs Of Society

And Now Joan Claybrook Is Denying It.....

Motorcyclist got a letter from Joan Claybrook, head of the NHTSA, the other day denying the legitimacy of certain quotes in a recent issue of *Newsday,* a Long Island newspaper. Since none of us commutes to Hollywood from Long Island, we hadn't seen an issue of that paper in, oh, the last several hundred years. We hadn't read the article and therefore didn't know what Joan was talking about. But we were intrigued. It had to be some kind of big deal to get The Administrator up tight, right? So we got on the phone and rapped with the professional scribe who'd pounded out the piece, *Newsday's* science writer, David Zinman. Dave had interviewed a doctor who didn't like to have to wear a helmet when he rode his motorcycle. Dave also got some quotes from somebody at the NHTSA. Joan didn't like those quotes. That's why she wrote to deny them. We asked him: Did you really talk to somebody at NHTSA? "Certainly," he replied with a trace of offended professional dignity. How about telling us who you talked to so we can confirm it? "No chance," said Dave a bit huffily, then added not quite to the point, considering the nature of the controversial quotes, "You know what happens to whistle blowers."

Well, anyway, we hereby present you with Zinman's *Newsday* piece and Joan Claybrook's response to it, just so you'll know as much as we do. We're also appending Joan's official biography, again so you'll know just as much as we do. The biography fails to mention that she is a divorcee and that she was appointed by President Carter. We might add Joan makes no secret of the fact she dislikes motorcycles and can't understand why people ride them.

□Two months ago, swarms of motorcyclists descended on Albany seeking repeal of the state's mandatory helmet law. They listened raptly as one of their number spoke from the statehouse steps.

"Nobody is against wearing helmets," said A. Ranald Mackenzie. "But why should wearing or not wearing them be the concern of the law?" Hundreds roared approval.

Though he won their applause, Mackenzie seemed as out of place as a De Soto in a carlot of Volkswagens. He is 50 years old, a widely respected, Scottish-born physician, chief of urology at Long Beach Memorial Hospital and a staff member of Memorial Hospital in New York City.

But as national president of the Motorcycling Doctors Association, Mackenzie shares the younger bikers' enthusiasm for the open road and their distaste for mandatory helmet laws.

"Helmets save lives in some kinds of accidents," Mackenzie says. "But it is the element of compulsion that rubs me the wrong way . . . "

Mackenzie is a man of many faces. To his neighbors in Point Lookout, he is a quiet but solid citizen, the father of three, an accomplished pianist and painter, a conservative both in dress and politics. To his medical colleagues, he is a competent, no-nonsense clinician, an innovative reseacher whose studies have been published in the nation's leading medical journals.

But soon, Mackenzie will once again swap his doctor's white coat for his biker's brown leather jacket, boots, leather gauntlets, sunglasses and mandatory helmet. He will mount his black Suzuki RE-5 motorcycle, rev up and power off on a 2,500-mile, five-day ride to Billings, Mont. There, he will preside over the Aug. 26-27 annual convention of the Motorcycling Doctors Association, a small group he organized last year.

Mackenzie does not dispute the hazards of motorcycling. Eighty to 90 percent of all reported motorcycle crashes result in injury or death, while fewer than 10 percent of car accidents do. What motivates him—and the three dozen mostly middle-aged physicians and dentists in the group—to devote themselves to a dangerous mode of travel usually associated with youngsters?

"It's in the blood," Mackenzie says, a glint in his gray-green eyes, a trace of a burr in his voice. "I first rode a motorcycle as a teenager. It was about the most exhilarating thing I ever experienced. Some of that remains . . . . It's a tremendous thing to flog the iron horse."

The physician-dentist motorcyclists, Mackenzie said, want input with state legislators considering new motorcycle laws and fairer treatment of cyclists in court. "Many times, they are killed and motorists are let off with a slap on the wrist as if they killed someone of no use to society," Mackenzie said. The group also wants to improve motorcycling safety, compile more accurate and meaningful accident statistics and upgrade the image of motorcyclists.

The latter goal may be the most difficult. In a recent Newsday interview, a spokesman for the National Highway Traffic Safety Administration said of the cyclists who lobby for repeal of helmet laws: "Have you seen who they are? They are frightening. They are Hell's Angels and the dregs of society. They are apalling people—violent, crude. They pride themselves on their macho. It [fighting helmet laws] is a macho bit . . . "

Mackenzie dismisses this characterization as "stupid and ill-informed." He says rowdy bikers constitute only a minute percentage of the nation's 10 million cyclists. "But," he admits, "our [medical] colleagues look at us [motorcycling doctors] askance. The public must understand that it is the average American who rides a motorcycle."

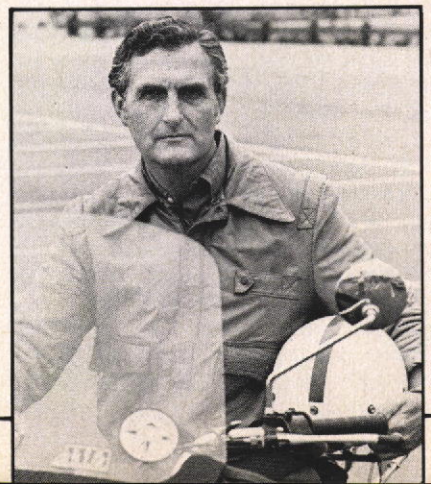
Whatever the popular image may be, it is a fact that the mandatory helmet law is the most controversial issue among motorcyclists. The National Highway Traffic Safety Administration, an arm of the U.S. Transportation Department, says that motorcycling deaths rose 23 percent from 1976 to 1977 after 22 states repealed helmet laws.

The repeal (an action since taken by four more states), was a "major factor" in the increase in fatalities, says Joan Claybrook of the safety administration. "Opposition to state helmet laws comes in the face of overwhelming evidence that motorcycle helmets save lives by reducing the severity of head injuries," she says.

Both Mackenzie and the American Motorcyclist Association dispute the administration's contentions. Gene Wirwahn, the association's legislative director, says the fatality totals fail to take into account such key variables as total miles driven, the number of new riders and the weather. Most important, he says, the statistics do not include the total number of accidents.

"To find out if helmets protect, you have to know the number of fatally injured motorcyclists per 100 accidents," says Wirwahn. "This data really addresses whether helmet laws reduce the number of fatalities per accident."

His group has done this, he says, by taking 18 states that have had the helmet law for at least three years and that properly report fatalities and comparing their ratio of accidents to fatalities for the years before and after adoption of the helmet law. The overall fatality ratio was 2.6 per 100 accidents before helmet



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laws were adopted and 2.5 per 100 accidents afterward—"no statistically significant difference," Wirwahn says.

If proponents and opponents of helmet laws differ on statistics, they also are at odds on whether the government has the right to mandate safety requirements. Ben Kelley of the Insurance Institute for Highway Safety, a non-profit group supported by insurance companies, says motorcyclists who are injured or killed are not just isolated accident victims. They become a burden to all of society. Tax-supported ambulances, hospitals and doctors have to care for them. If they are permanently maimed or crippled, taxes support them and their families for the rest of their lives. "Therefore," Kelley says, "the government has a stake in their safety"

But Mackenzie says that if the government takes this approach, it cannot do so in discriminatory fashion. "If the social burden argument is to be sustained, it must be established across the board," Mackenzie says. "Let's look at smoking. There will be 102,000 new cases of lung cancer in 1978. The mortality rate is over 90 per cent and the costs to society are tremendous. How about the country's alcoholics? Their impact on society is enormous. But the government isn't banning smoking or drinking . . . What the government is trying to do by supporting mandatory helmet laws is establish a precedent. The ultimate aim is to harness the motorist [with mandatory seat belts and air bags] . And it knows if it can't make it with motorcyclists, it can't make it with motorists."

Mackenzie's is not the prevailing opinion in his profession. The American Medical Association advocates helmets for cyclists, although it takes no position on laws mandating their use. Dr. Joseph Greensher of Mineola, state chairman of the accident prevention committee of the American Academy of Pediatrics, says the ultimate question is whether helmets protect. "I have been in the accident prevention field for 25 years," he says, "and everything I have seen has emphasized there is a reduction in the severity of injury to the head where a helmet has been worn."

Mackenzie points out that some reports say a helmet increases neck injuries, reduces visibility, impairs hearing and intensifies the heat around the rider's head—reports disputed by both the AMA and the motorcyclist association. Nevertheless, Mackenzie says, even conceding the helmet's effectiveness as a safety device, that is not the central issue. "I'm not against wearing a helmet. I'm against the existence of a law forcing people to wear one. It has been passed because motorcyclists are a vulnerable, visible, conspicuous minority.

"It may seem like a small thing to some," Mackenzie adds. "But in 'Mein Kampf,' Hitler advocated the tactic of salami slicing. You whittle away at freedoms a little at a time. If the public acquiesces and surrenders a small part of its freedom, it will soon have no ground to complain about greater encroachment."

Some weeks ago, an article over the byline of Mr. David Zinman appeared in the New York newspaper *Newsday* concerning the subject of motorcycle helmet use. In the course of that article, Mr. Zinman attributed certain anonymous quotes to "a spokesman for the National Highway Traffic Safety Administration," which were quite derogatory to motorcycle riders in general.

Since the appearance of that article, the anonymous quotation has been picked up and given wide circulation by other publications. I am writing to assure you, as I have others, and as I have said in several public forums, that the views and opinions cited by Mr. Zinman do not in any way reflect or represent my views, the views of this agency or its employees. Our agency is given the charter to concern itself with the safety of all of those who use our highways, no matter who they are. In fact, the agency employees who are intimately and daily involved in motorcycle safety work are themselves motorcyclists. It would be unthinkable that they would hold the views anonymously attributed to them concerning their fellow cyclists.

I would appreciate very much if you, as Editor, would assist us in informing your readers that we do not subscribe to the views anonymously attributed to us in the *Newsday* article.

Thank you for any assistance you can provide.

Sincerely,

Joan Claybrook

Joan Claybrook

Official Biography Of Joan Claybrook

Joan Claybrook was sworn in as Administrator of the National Highway Traffic Safety Administration, an agency of the U.S. Department of Transportation, on April 8, 1977.

Prior to her appointment, she directed a public citizen group called Congress Watch since January 1973. That organization worked for enactment of public interest legislation.

This is Claybrook's second stint with the Department of Transportation. From September 1966 to early 1970, she served as special assistant to Dr. William Haddon, Director of the National Highway Safety Bureau, and then Haddon's successor, Acting Director Dr. Robert Brenner. The Safety Bureau was upgraded to a full administration in January 1971.

For more than two years after she left the federal government, Claybrook worked for consumer advocate Ralph Nader's Public Interest Research Group as a researcher and organizer concerned with health and safety matters, particularly in auto safety.

Claybrook spent most of 1972 directing Nader's Congress Project, which profiled 484 members of the U.S. Congress.

Claybrook began her federal career in October 1959 as a research analyst in the legislative office of the Social Security Administration. She remained with the Social Security Administration until November 1965 when she accepted a Fellowship in

COURTESY MOTOR TREND

Congressional Operations, American Political Science Association. Under this program, she worked as a legislative assistant to former Congressman James A. Mackay of Georgia and Senator Walter Modale of Minnesota, before leaving in the fall of 1966 to join the National Highway Safety Bureau.

Born in Baltimore on June 12, 1937, Claybrook received her high school diploma from the Roland Park Country School in Baltimore and a BA degree in history from Goucher College, Baltimore, in 1959. She received her JD degree in 1973 from the Georgetown Law Center in Washington, D.C.

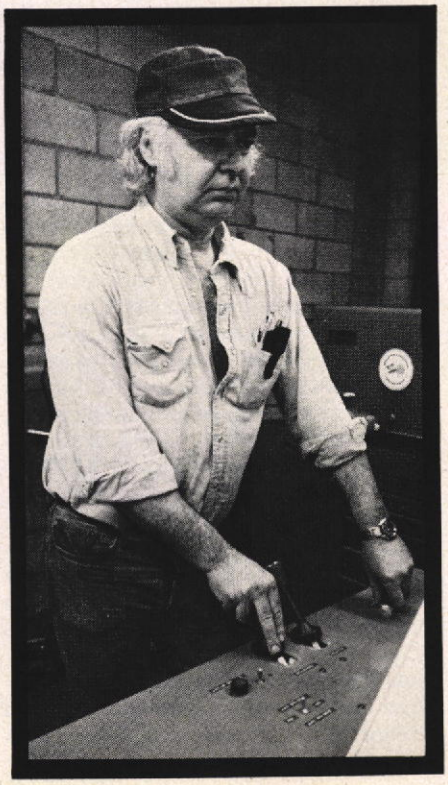
THE STEVE PICK RACING ENGINE

What you are looking at is the most powerful engine ever created to propel a dirt-track motorcycle around the mile and half-mile ovals of America. It was built specifically to line up next to a pack of Harley-Davidsons and smash them. A vision in the mind of its builder, Steve J. Pick of Villa Park, California, underlies the thousands of dollars and endless hours spent on the project, and that is the moment when his hand-built 750 slides through the first turn of the San Jose mile neck-and-neck with a Harley, and then with pure horsepower and a screaming roar from its pipes, pulls clear of the Harley down the back straight. Don't be too surprised if that happens during the 1980 season. Pick has taken the engine from a few sketches to this point in less than a year and dyno runs have already produced 110 horsepower, with more available. The hardest running Harleys pump just over 90 hp.

Steve Pick has wanted to build his own engine since 1948. His years as a motorcycle racer in the Fifties and later as a precision machinist building trick parts for car engines helped formulate the design in his mind. But the real motivation to actually begin building came from Harley-Davidson last year. A young Junior dirt tracker named Matt James worked in Pick's machine shop and raced Ascot's half-mile on a Triumph—with only moderate success. So Pick decided to buy him a Harley. The factory told him to try a local dealer. The dealer said he just sold his last XR dirt tracker, but so-and-so up north had one. No, said so-and-so, but you might try Seattle. Seattle said they couldn't even get parts, let alone a whole bike. Pick tried every Harley dealer on the West Coast and came up blank. The used market proved just as tight and equally frustrating, so Steve Pick simply decided to build his own motor. From scratch. Out of formless chunks of solid steel and aluminum.

Though inspired by the unavailability of Harley racers, the project is not a vendetta against Harley-Davidson. It is a crusade to win, for Steve Pick is a do-or-die racer, and nothing else matters. On his office wall there are pictures from the Fifties of him sliding sideways on Harleys and Triumphs—trying to win. He has built top-fuel dragracing motors which have held national records. He milled the first billet crankshafts for Offenhauser's winning Indy cars. Presently his shop does all the machining on Keith Black's 2000-horsepower drag engines. He has what it takes to win and he's not used to losing. But make no mistake, it pleases him immensely that a $220-million subsidiary of giant AMF Corporation will be his victim.

To win the San Jose mile Pick must play by AMA rules which state that 25 engines must exist for homologation. So he and his machine shop will build 25 engines, and hopefully their success will turn into a business which can sustain production of 200 units a year, about the same as the number of XRs sold yearly. Pick says the engine is not just for dirt-track ovals. It will work for TTs, roadracing, boats, miniature race cars, street bikes, anything where the owner wants a state-of-the-art racing engine. It's built to be flexible. For instance its 750cc size can be punched to 1000cc for superbike racing or dropped to 500cc if the AMA changes dirt-track rules. It has special bosses in the cylinder so extra head bolts can be added by anyone who fits a supercharger or turbo. If USAC drops Indy car displacement from 158 cubic inches to 1500cc (90 c.i.) as rumored, Pick can add two more cylinders easily and have an "Offy eater."

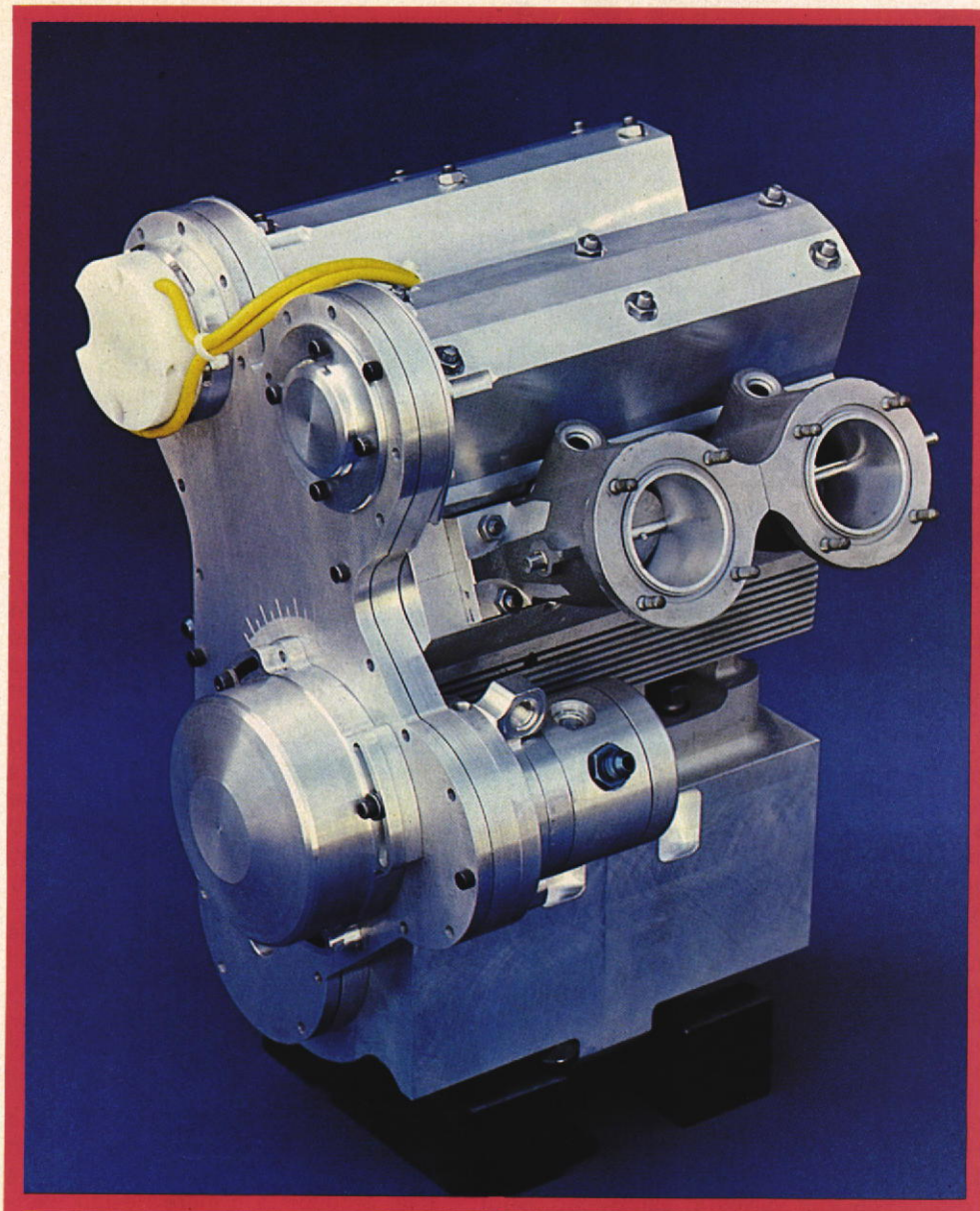


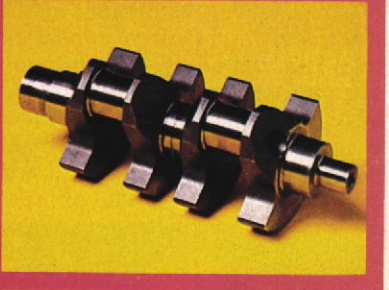
PHOTOGRAPHY: DALE BOLLER, MIKE LEVASHEFF

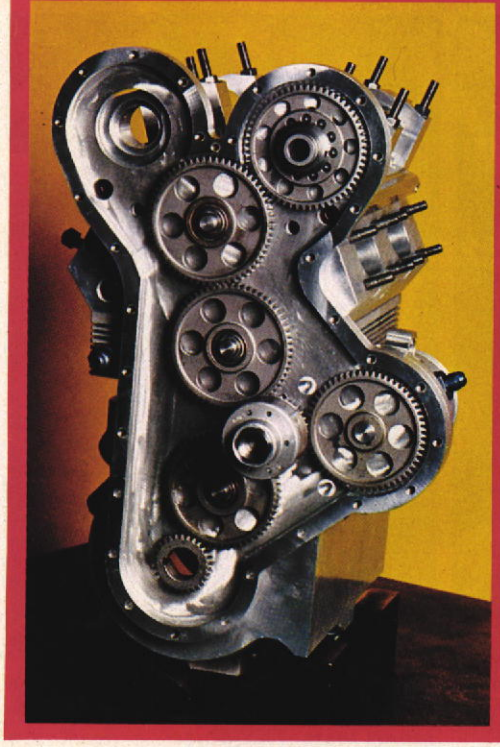
The engine is a water-cooled 360-degree vertical twin with fuel injection, four valves per cylinder and gear-driven double-overhead cams. Liquid cooling and fuel injection, strangers to U.S. dirt tracking, are AMA legal if originally included in an engine's design. Why water cooling? "If you've ever run an air-cooled motor on the dyno, you'd know why," says Pick. "The first flash reading always gives the best horsepower, but an air-cooled engine can't sustain that power level after it gets hot. And there's no control with air cooling—you're at the mercy of the weather. If our engine runs best at 190 degrees, we can increase or decrease water flow to maintain that temperature no matter what the weather is. Besides, water is lighter than aluminum."

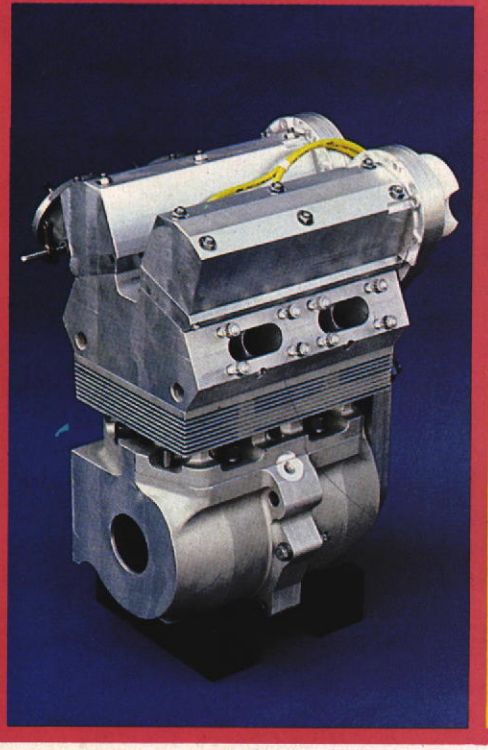
Fuel injection should make more power, but Pick prefers it because it's so easy to tune. "Once it's dialed on the dyno you can't make a mistake at the track. Just measure the altitude and air density and a book tells you what pill to use. That's it." In fuel injection a pump sprays raw gas into the intake tract through a nozzle, and the pill, a tiny brass button with a hole in the middle, meters the amount. "You don't see carburetors on the really fast race cars anymore," grins Pick.

Forged Arias pistons with 10.6:1 compression move in an iron liner. To reduce weight the present four-bolt tubular rods, the strongest known, may give way to a blade design with two bolts if they prove reliable enough. Durability and reliability are design priorities. "We don't want this engine to frag if a guy misses a shift," says Pick. Consequently there are huge ball bearings all over the place, and even *three* separate bearings on the crank, two huge outer ball bearings and a giant center plain bearing supported by a large plate which bolts internally to the outer cases. The most obvious example of back-up engineering are 11 huge head bolts—bigger than those on a blown Chrysler V-8. They clamp the head and barrel in a machined fit so there is no head gasket to blow.









PICK ENGINE

Pick modifies Donovan dragster valves for his engine and ends up with 36.5mm intakes and 35mm exhausts. They each open .465 inch with timing of 29 and 59 degrees on the intake and 59 and 29 degrees on the exhaust. Cams machined by Pick and ground by Isky activate the valves via lifter buckets with adjuster shims underneath, exactly like a Kawasaki 650. Pick is particularly pleased with his selection of a 20-degree valve angle. "I read one place where 15 degrees was best and another where 17 degrees was best and somewhere else that it ought to be 22 degrees. Then someone told me a Ferrari had 18 degrees and I began to get confused. One night after many late hours of study I pulled out a calculator and averaged up all the different valve angles. The answer came out 20 degrees so that's what I used. About two months later Cosworth announced that months of testing and thousands of dollars in research had convinced them to change their valve angle from 22 to 20 degrees. That tickled me a lot."

The engine fires Champion plugs with a conservative 28 to 30 degrees of spark lead. The present ignition is electronic, but Pick is considering a total-loss battery system for consistent performance and reliability. "I've seen a brand new engine on Keith Black's dyno make nowhere near the power it should, and after checking everything, Keith pulls out an old magneto he knows is good, bolts it on and the engine rips like it's supposed to. Production quality on electronic spark systems varies too much—maybe only one in ten will work at its maximum and be reliable as well. And magnetos are too hard to diagnose. If something goes wrong with a total-loss system, you only have to check four things—the battery, points, coil or condenser."

Pick went to a heavier and more expensive gear drive for the cams because he believes a chain will stretch enough to retard the timing slightly, and he wants the pinpoint timing control of gears. He avoided belts when a Chrysler engineer told him, "Belts are fine if you're in the belt business, because you'll have a better design to sell every few months. To me that means the present one isn't perfected yet."

A satellite gear on the cam-drive system spins a shaft with four trochoid pumps, three for oil and one for water. The main oil pressure pump routes lubricant through cylinder galleries to a hole in each lifter bucket guide. When the cam pushes the bucket down, it uncovers the hole so oil flows directly onto the most critical spot in the valve train. From there it drains back to the crankcase where two scavenge pumps, both twice the size of the pressure pump, collect the oil from either side of the center main bearing and route it through an external filter canister on the way back to the oil tank.

Pick chose highly oversquare dimensions of 82.5 x 70mm to make the bore big enough to accommodate four valves in each head. Short rods help build a stronger torque curve in the midrange so output is fairly flat and tractable from 6000 revs to the projected redline of 11,000. The engine won't be a super torquer like the Harleys, but Pick has learned the importance of tire hook-up so will try to avoid traction-breaking power characteristics as much as he can on a high-revving engine.

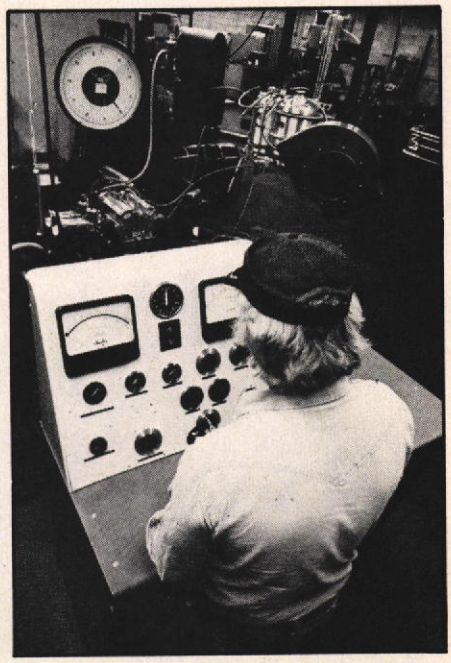
His original design approach showed little concern for tractability. He felt that if a Harley had 90 horsepower and he supplied 20 or 30 more, winning would be easy. But then Mert Lawwill, Gary Scott, Bruce Burness and others with intimate knowledge of dirt-track racing saw the engine as you see it here and questioned whether its small flywheels and explosive power would translate to forward motion, or merely tire spin. Pick listened. He went to San Jose and photographed bikes coming out of the turns. He listened to them bog, or spin, and he heard Garth Brow, on Lawwill's Harley, hook-up and pull hard. He watched Brow win. Then he returned to his machine shop and redesigned the whole engine for a wider powerband and enough room to carry the same size and weight flywheels as a Harley if necessary.

This willingness to listen to experts and make expensive design changes will be a key to his ultimate success. "There's no such thing as being committed to one design. We'll change anything to make it win," says Pick.

In the wake of this philosophy the engine you see here has evolved from what Pick thought would be a final product to a mere design exer-

Dick Holt hand-built almost every piece on the Pick engine. He's a master machinist who wants to win.

An enormous sound bellows from these two pipes—the sound of 110 hp. Mike Chysyk does the tuning.



Pick controls the Clayton water brake dynamometer during hp measurement tests. The noise is deafening.

cise which tests basic concepts. His production engine will be much better, and completely different. Initial track testing will be done with this one while tooling is prepared for the production version, but then this engine goes inside a glass case for display in Pick's living room.

In this version the barrel has cooling fins to retain the classic look of a motorcycle engine, a move motivated by nostalgia and marketing, but subsequently abandoned for efficiency. The new engine will have water jackets all the way to the cases. It will also be smaller (two inches shorter than a Harley, the same height as a Triumph) and about 15 percent lighter than the 139 pounds it weighs here. It will have narrower cases, less bulky cam covers and through-studs will sandwich the cylinder between the head and cases rather than using the present separate studs which increase complication, cost and maintenance time. The water and oil pumps will be moved in front of the cylinders so the transmission area can be more compact. Though still being engineered at this point, the non-unit transmission will bolt to the cases and consist of a triplex primary chain, multi-plate wet clutch and a five-speed constant mesh gearbox with drum shifting.

Engines should be ready for sale about 10 months from now—just in time for the first San Jose mile of 1980. The cost, "ready to slip in a chassis and go win," says Pick, "will be about $4000." That's $200 more than a Harley engine.

The price is high, but so is the horsepower. Dyno runs with untuned pipes have produced 110 horsepower, which puts Pick in the enviable position of merely needing to ensure reliability and tractability, whereas Harley-Davidson, already close to the horsepower limit, will somehow have to find more. Right now Pick's engine bends the ¼-inch steel plate that secures it to the dyno when he loads the Clayton water brake hard. "We have to hammer out the motor-mount bolt and heat the mounting plate with a torch to get the engine off," Pick says. Fitted with straight pipes still in the experimental stages of tuning, the engine has a fractured idle that sounds unhappy below 4000 revs. Then it smiles and burbles momentarily as it feeds on revs and the sound becomes a wicked howl that rattles windows and unties your shoe laces. Behind the pipes the blast feels like you're standing in front of firehoses spitting at full volume.

Pick feels his engine can eventually produce 3 hp per cubic inch on pump gas, or an incredible 135 hp at 11,000 rpm. At this output a 500cc version would make what the Harleys do now—91.5 hp. If AMA changes the rules as rumored, not many 500 singles from Japan with a maximum potential of 60-62 hp could run with that. Then, if Pick went completely power mad and built a 1000, it could potentially spin off a whopping 183 horsepower.

In the meantime there's a lot more work to do. Pick must finish dyno testing, complete the transmission, build a chassis, then spend weeks on actual tracks to finalize details for production. Then he must build casting dies and actually manufacture the first 25 engines. He'll have help

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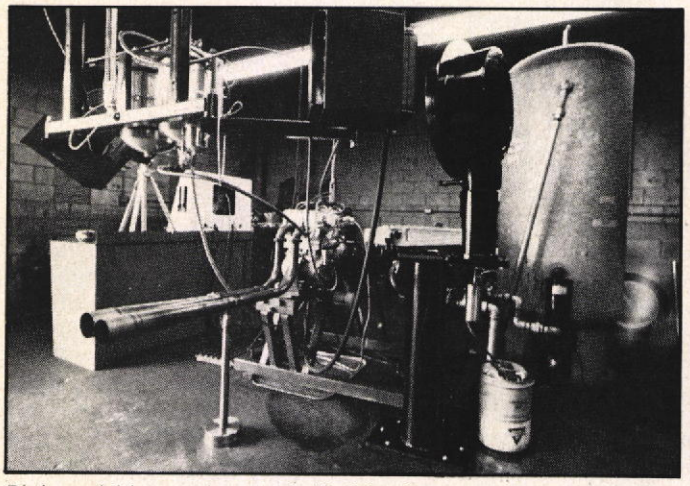
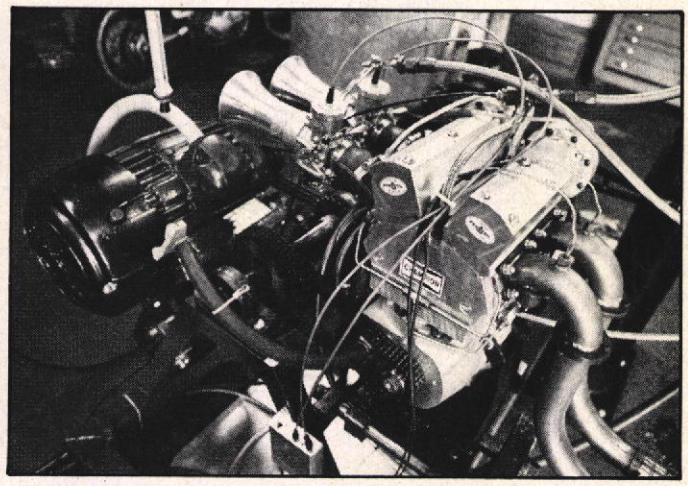
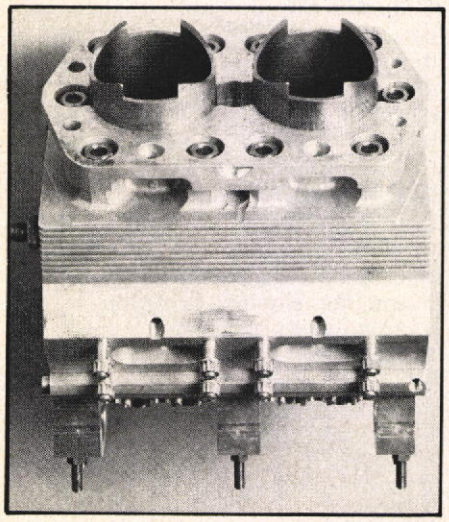


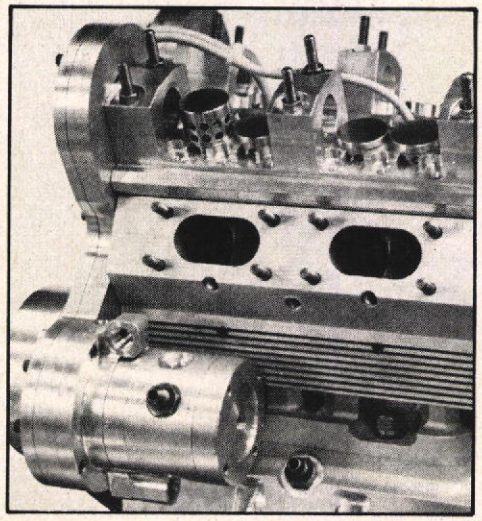
Pick and his employees built this dynamometer facility in the corner of his machine shop. Huge tank holds water.



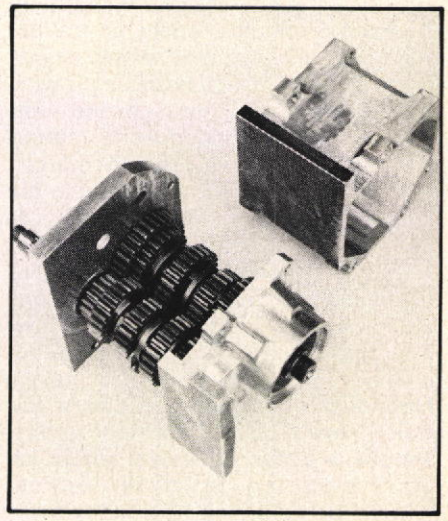
Carburetors replace fuel injection during certain dyno tests. Engine vibration is there, but less than a Harley.



Ten ultra-large bolts secure the head to the cylinder in this version of the engine. The liners are ductile iron.



Pick used an elongated intake port design flowed by W.R. Grace Co. Triple-trochoid oil pump is at left.



Prototype transmission uses a custom cluster from Gear Engineering. Dick Holt will build shift mechanism.

Hopping Up The XR Hondas

By Rich Cox

The Factory's Approach To Reliable Horsepower

If you're obsessed with off-road four-stroke singles, Honda's new XR185/250/500 enduro machines have probably caught your attention by now. And, if you're like many who are never quite satisfied with a stock engine's performance, you've no doubt caught wind that Honda is offering factory hop-up kits for all three engines. These kits were designed and developed by Honda R & D and will be sold on a limited basis through the Hondaline accessory department.

The 185 and 500 kits are pretty simple and supply a rather subtle power increase over stock. They could have easily been incorporated into the original designs without increasing production costs, so the obvious question is: Why didn't Honda produce them this way to begin with, especially when four-stroke enthusiasts are so influenced by performance? The answer lies in marketing. Honda has always catered to the masses and rightfully so: we'd figure a large percentage of the XR owners won't even bother to change the oil or adjust their bike's chain, let alone balk for more engine steam. However, the real reason Honda remained conservative was to retain a high degree of reliability and a low noise level—both of which understandably suffer somewhat when you start pumping in more ponies. "You'd be surprised how many bikes we sell simply because they are quiet," remarked one Honda official.

Honda isn't necessarily selling these kits to make a huge profit, nor are they labeling them as the ultimate hop-up either. They simply want to publicize how easy and affordable it is to extract added performance from the XR engine. There will likely be other accessory outfits who will be offering even larger doses of horsepower at gut-wrenching prices, but Honda feels they have a trusting clientele and many will opt for these kits simply because they have the factory's "genuine" approval stamp.

Before you dive headfirst into the 185 kit, bear in mind that it offers only a 2.8 horsepower advantage over the stocker, so the performance gain is very slight. The 185 kit consists of three sub-assemblies—a muffler, air cleaner and big-bore kit—which you can buy all together in kit form or separately as regular replacement parts.

1 Muffler Kit: The performance muffler, which weighs one pound less than stock, should be the first step in the 185 hop-up. Its bark is much more authoritive, but it's still within AMA's sound limit and still retains the USDA-approved spark arrester. You'll notice that the right side panel needs to be cut away for pipe clearance, but Honda has looked ahead in this area as the stock panel already has a cut-out template etched on the inside.

2 Air Cleaner Kit: This consists of a complete replacement airbox with increased volume and better flow characteristics. It's distinguishable by its three intake holes.

3 Big-Bore Piston Kit: This package includes a new barrel and a larger 65.5mm piston which ups compression from 10:1 to 10.8:1 and boosts displacement to 196cc. It's possible to bore the standard cylinder and install the kit's piston, but the factory felt their own cylinder was necessary for reliability.

We spent a full day in the desert comparing a kitted 185 and 500 against their stock counterparts and found the hopped-up 185s added performance is really slight—it takes a head-to-head drag race through all six gears to tell the difference. In that event the souped-up 185 did show its strength by putting the stocker about 15 feet behind. The added displacement does give slightly more mid-range power for pulling deep sand-washes and will net a 5 mph higher top-end, but other than that the stocker stays right on its heels. Economy and reliability suffer somewhat simply because the engine spins a little higher: you can expect gas mileage to drop about 20 percent and you may find yourself installing XL350 clutch springs to cure a slipping clutch—one area the stockers seem to be weak in from the beginning. The performance gain is there if you've got keen feelings, but frankly for our money, we'd rather install some better suspension components—you could likely go as fast or faster with the improved suspension than the engine hop-up.

The 500 kit really impressed us because it supplies a healthy increase in power right where the 500 engine really needs it—in the mid-range and on the top-end. Honda has followed the conventional four-stroke hop-up technique with the 500 by offering four basic sub-assemblies; a new muffler, high compression piston, racing camshaft and a larger carburetor.

1 Muffler Kit: The performance muffler, which looks nearly identical to the stocker, weighs 2.4 pounds less and like the 185's, is considerably healthier sounding. It too is within the AMA's sound limit and features a USDA-approved spark arrester.

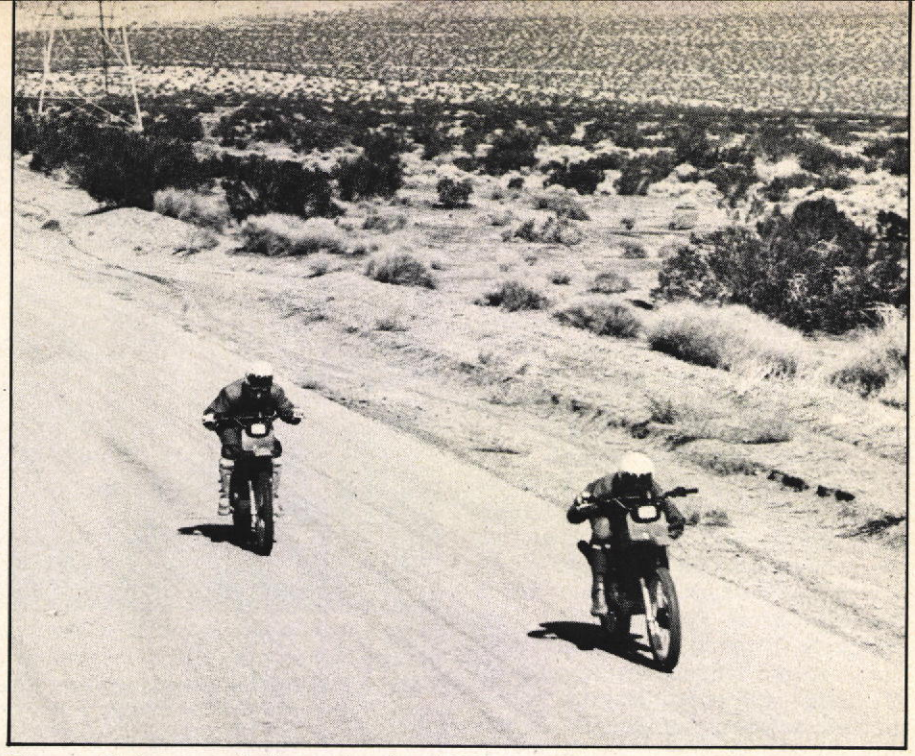
2 High Compression Piston: This assembly consists of a relieved slipper-type piston which ups compression from 8.6:1 to 9.5:1; displacement remains the same. Two oversize pistons are also available.

3 Racing Camshaft: The performance camshaft has the identical lift and valve lash settings as the stocker, but features 10 degrees more overlap for racier cam timing. The valves open five degrees sooner and close five degrees later.

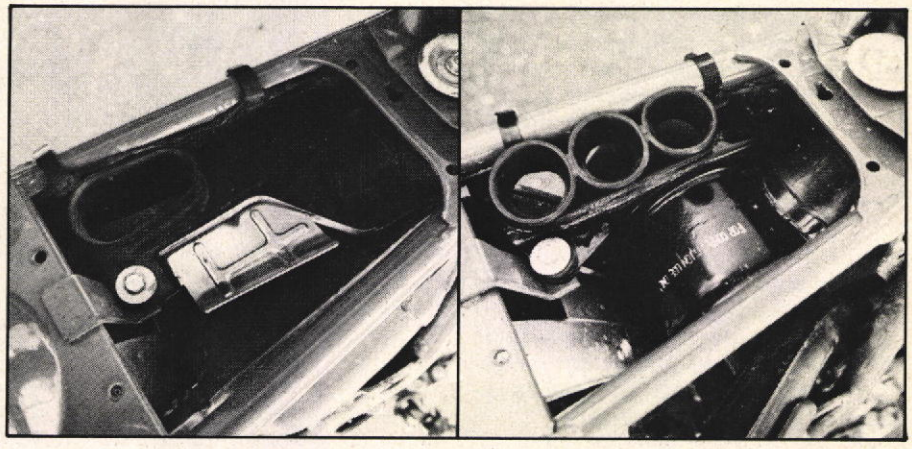
4 Carb Kit: Honda is rather unconventional here. Instead of using a Mikuni like most everyone else, they've

exchanged the stocker's 34mm Keihin with a 36mm Keihin (CR-type two-stroke carb) which they've bored-out to 37mm and modified for four-stroke usage. The kit also includes a single cable quick-turn throttle and a modification to increase the stock airbox's breathing capacity. Add all these pieces together and it mounts up to quite a performance increase: the stocker pumps out 35.9 hp at 6500 while the kitted engine is rated at 40.8 hp at 7000 rpm. You'll find the hop-up hasn't marred the 500's good-natured personality. It still starts quite easily under the increased compression, however the choke lever, which is now positioned on the carb instead of up on the dash, is really difficult to finger. Once fired, you'll be pleased in finding it hasn't lost one bit of that brawny low-end torque, nor is there any noticeable increase in vibration. What you will notice is the lightening-quick throttle response and the enormous boost in mid-range and top-end power. In a drag race through five gears, the kitted 500 left the stocker 25 feet behind, in addition to posting a five mph higher top speed. It will storm down sand-washes and scale power-sucking hill-climbs a gear higher than the stocker, and it definitely gets bonus points for doing outrageous wheelies—through fifth gear if you're a talented exhibitionist. You can really feel the increased power and it's easy-going power, the type that's a benefit in all types of terrain to all types of riders. We don't think anyone, aside from the most speed-hungry daredevils, will be disappointed with this kit.

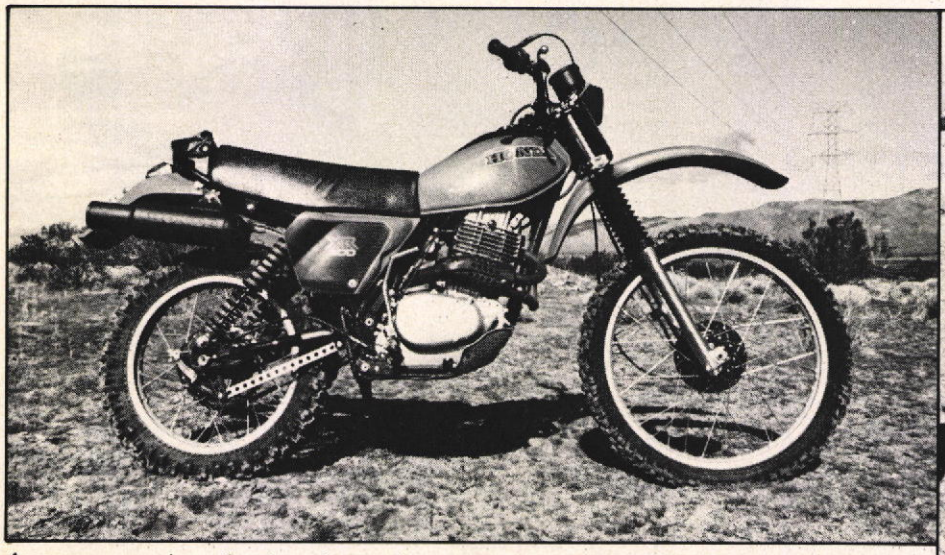
We didn't get a chance to sample a kitted 250, but here's what they're offering—and it's considerably more involved. There are six sub-assem-



From a first gear roll the souped-up 185 could pull the stocker by about 15 feet at the end of a quarter-mile—you decide whether it's worth it or not.



High-performance airbox on the kitted 185 (right) has more volume and features three inlets instead of one. It appears the larger airbox won't adapt unless the high-performance muffler assembly is installed first.



Appearance-wise, the two hopped-up Hondas are deceiving: The 500 looks just like a stocker but runs like a scalded rabbit—the 185 with its ferocious pipe looks like a killer, but its bark is bigger than its bite. Both bikes have still retained their familiar easy-going personalities despite the power boost.

PHOTOGRAPHY: DALE BOLLER

XR Honda HopUp

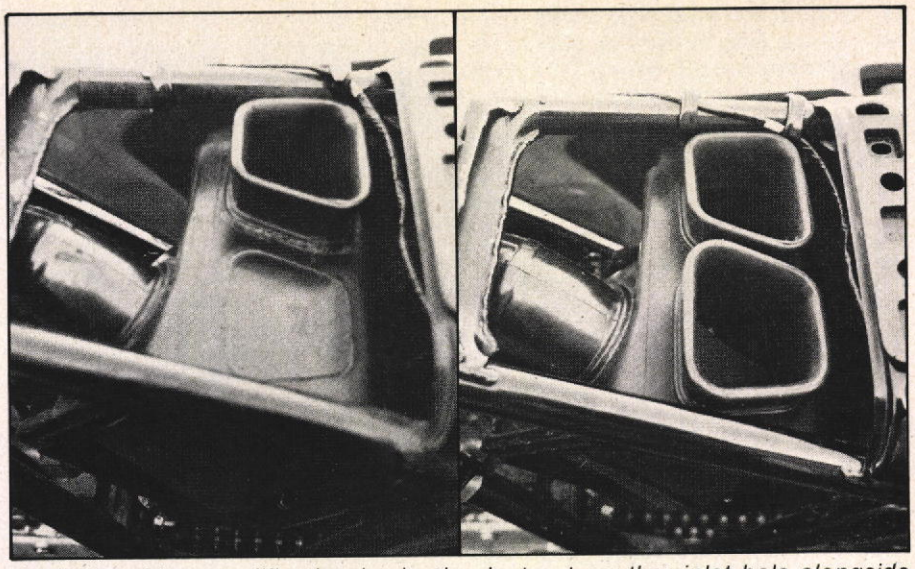
blies available: (1) A muffler assembly, probably like the 500's. (2) A bore-kit which consists of a new cylinder and a 76mm piston which raises compression from 9.6:1 to 10.3:1 and bumps displacement to 262cc—still AMA legal for competition. The cylinder has an extra thick liner and can be bored out to about 300cc. (3) A new cylinder head that's been ported and matched and features one-millimeter oversized intake valves. (4) A carb kit which has a pre-jetted 34mm CR-type Keihin carb (stock is 30.5mm), a special intake manifold and a quick-turn throttle. (5) An airbox with new inlets and a new element offering double the surface area of the stocker's. (6) A crankshaft kit featuring a totally new crank. It's been lightened and balanced and boasts new counterbalancer weights with special tungsten inserts and a lightened (shaved) connecting rod. They claim the crank kit provides a 10 to 15 percent increase in throttle response. The total package boosts horsepower from 24.6 at 9000 rpm to 29.8 at 9500. That's some big bucks for five horses.

We should warn you that by installing these kits—whether you do it or your friendly dealership does—voids the bike's original 90-day warranty—at least on those bits and pieces directly related to the hop-up.

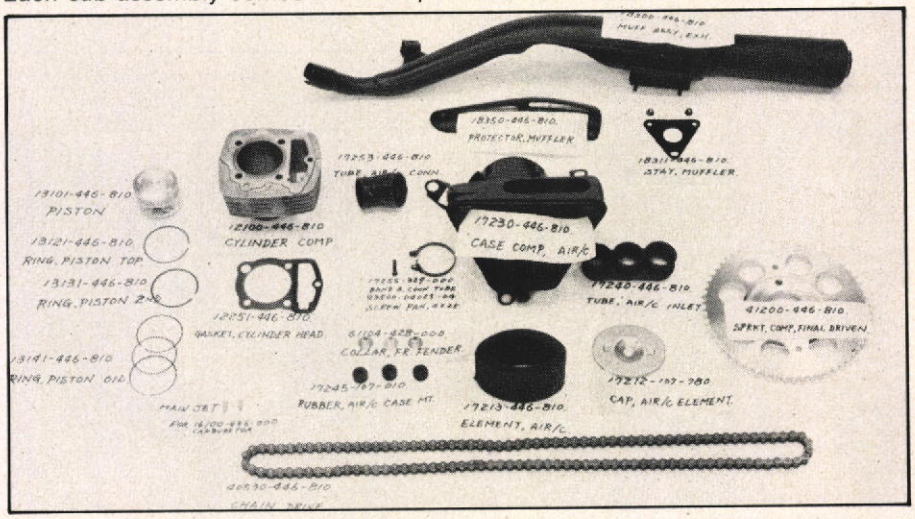
We know there will be many XL owners sniffing after these parts. Getting the internal engine pieces to adapt to the XL engine's shouldn't be any problem; now whether the pipes, airboxes and carbs will clear the XL's battery and electrics, we're not sure—we haven't had any bikes to compare. But then again, we know, that you know, that it's illegal to install any of these performance parts on an XL—don't we? *M*

XR HOP-UP KITS: RETAIL PRICES

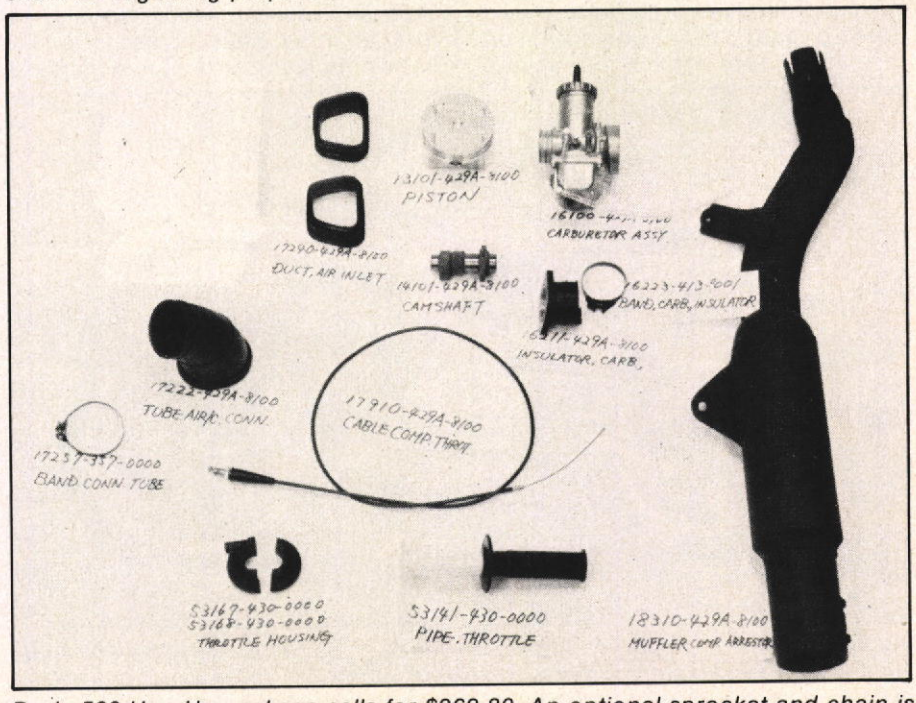
XR185	
Big-Bore Kit	$79.95
Breathing Kit (Includes high-performance airbox and muffler)	$129.95
XR250	
Big-Bore Kit	$84.95
Crankshaft Kit	$149.95
Air Cleaner Assembly	$44.95
Cylinder Head	$119.95
Carburetor	$89.95
Muffler	$84.95
XR500	
Carburetor Kit	$99.95
Camshaft	$49.95
Muffler	$79.95
High-Compression Piston	$39.95



The 500's airbox modification is simple: Just cut another inlet hole alongside the stocker's (the outline is already inscribed) and mount the rubber inlet. Each sub-assembly comes with complete installation instructions.



This is the complete *185 Hop-Up package which includes an extra sprocket and chain for regearing purposes. The whole ball of wax retails for $304.75.*



Basic 500 Hop-Up package sells for $269.80. An optional sprocket and chain is also available for about $90 more. All kits come with instructions.

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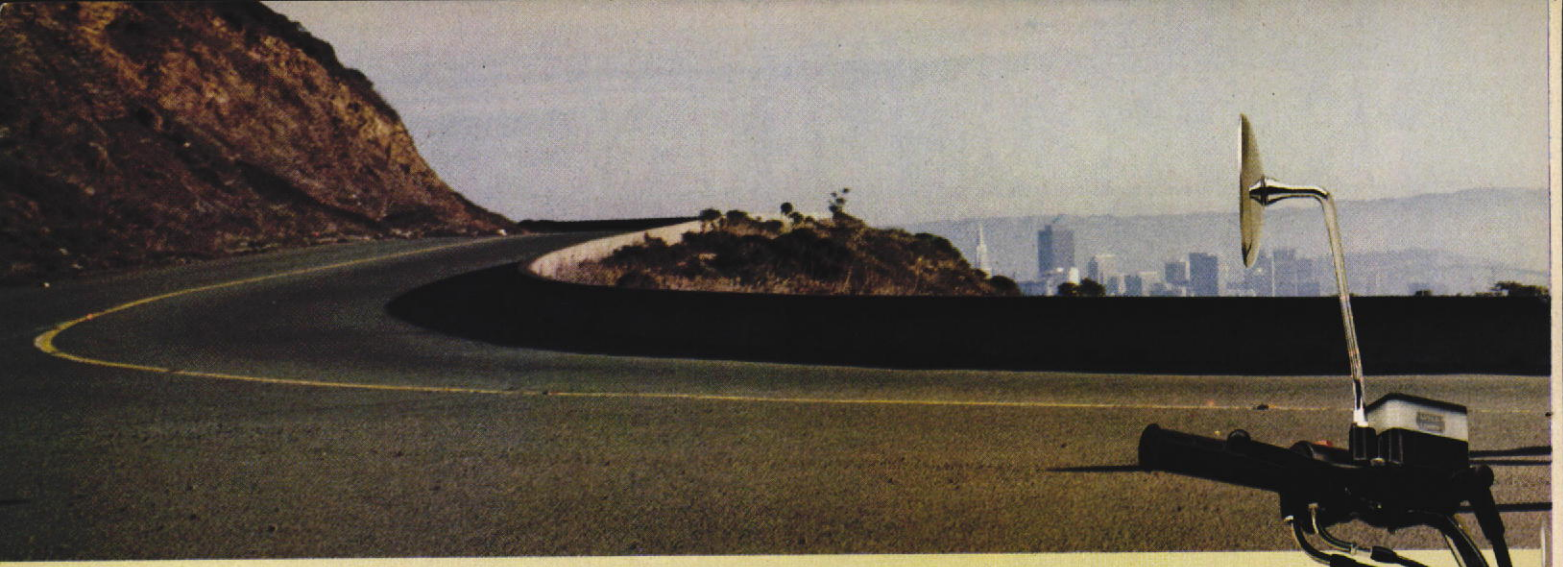
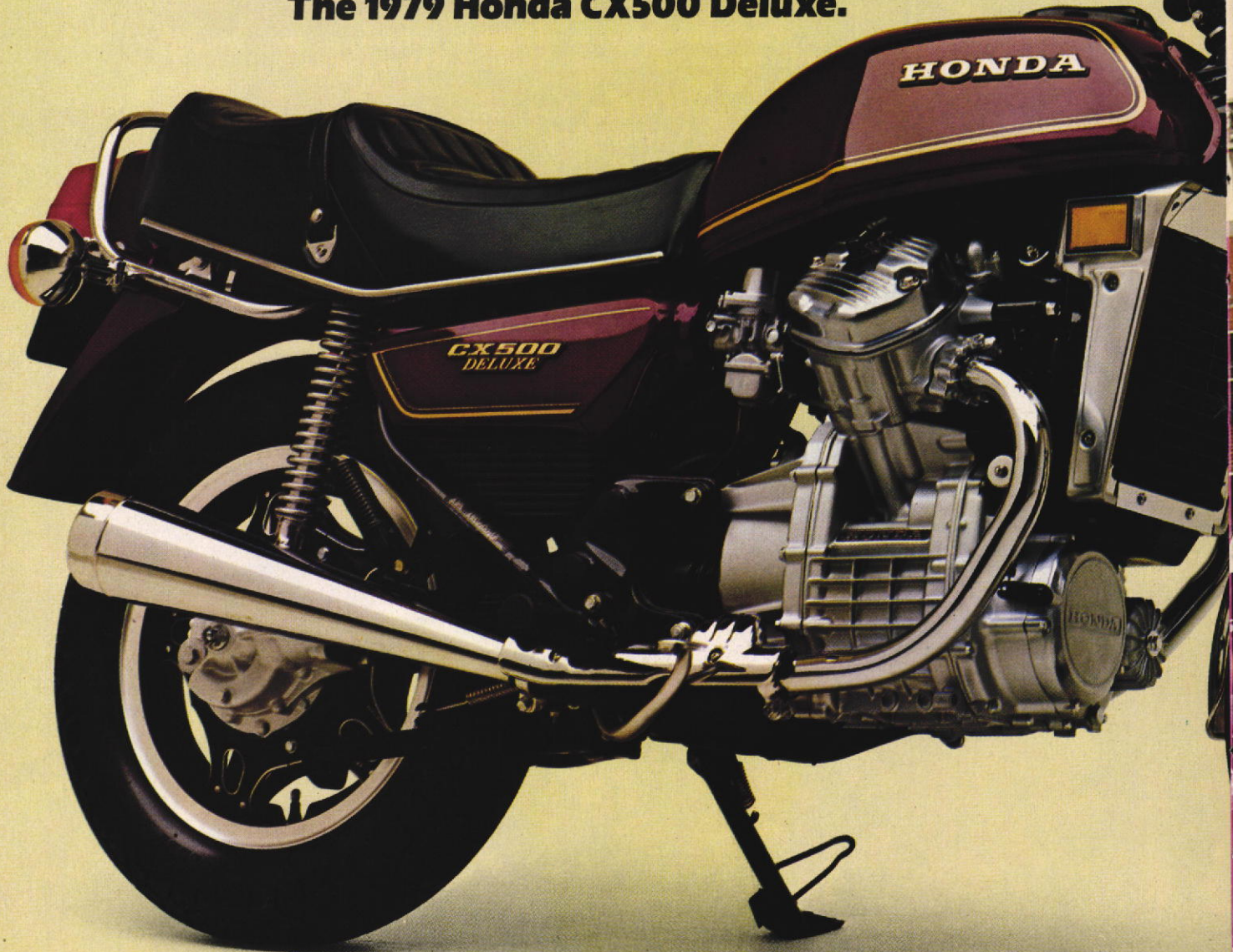
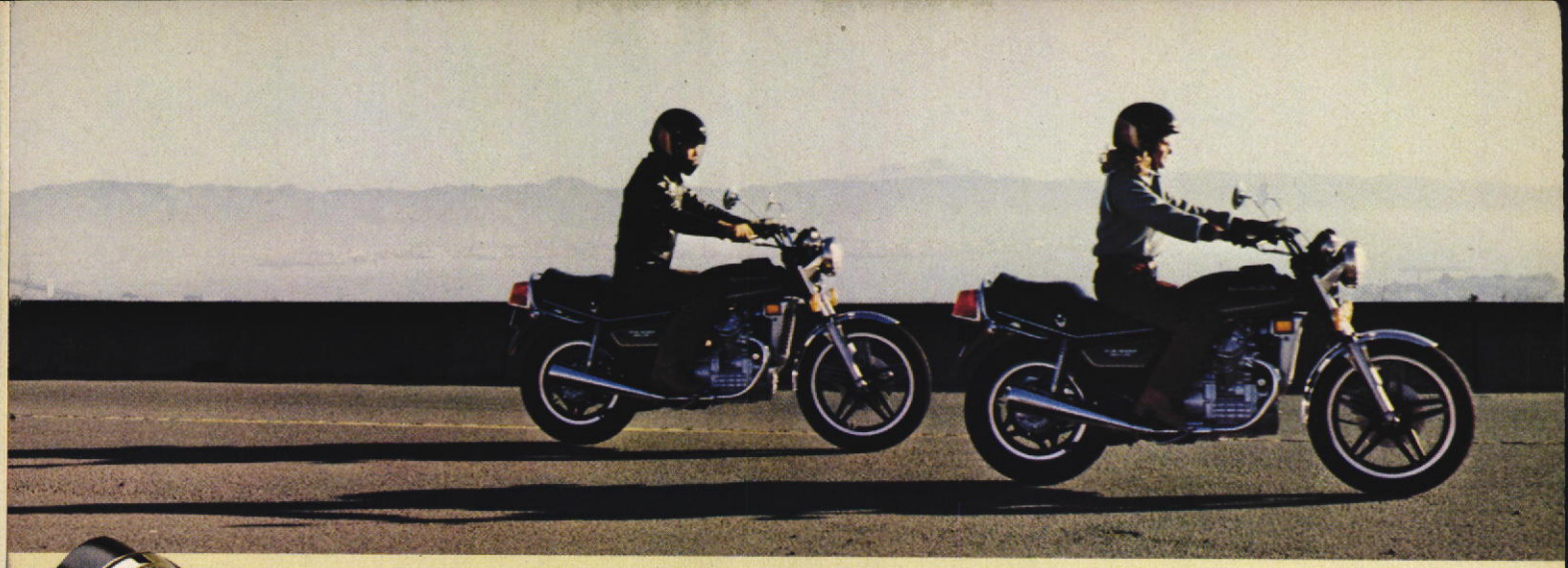


Escape First Class.

The 1979 Honda CX500 Deluxe.





If weekends bring out the gypsy in your soul, here's the machine that'll set you free—in style: the new 1979 Honda CX500 Deluxe.

It's got everything that made the original CX500 the toast of the middleweight sports-touring scene last year—low-maintenance shaft drive, trick V-twin engine, tubeless tires—and more. More comfort, with a cushy, stepped saddle. A stylish 16-inch rear wheel. And more to please the eye of the beholder.

The CX500 Deluxe has what it takes to go all the way, whether you're going for the weekend or for weeks at a time. The high-revving 496 cc liquid-cooled eight-valve 80° V-twin engine is the slickest setup to hit the middleweight class in a long time. Smooth enough for horizon-chasing. Spirited enough for sports riding.

When the weekend is over, the CX500 Deluxe keeps on going. It's the perfect size for all-around urban riding. And when it comes to good looks, it's in a class by itself—First Class. Special Deluxe trim touches include highlighted black ComStar™ wheels, polished aluminum radiator cowling, chromed front fender, classy new tank striping and polished engine parts. It's a look that'll turn heads wherever you go.

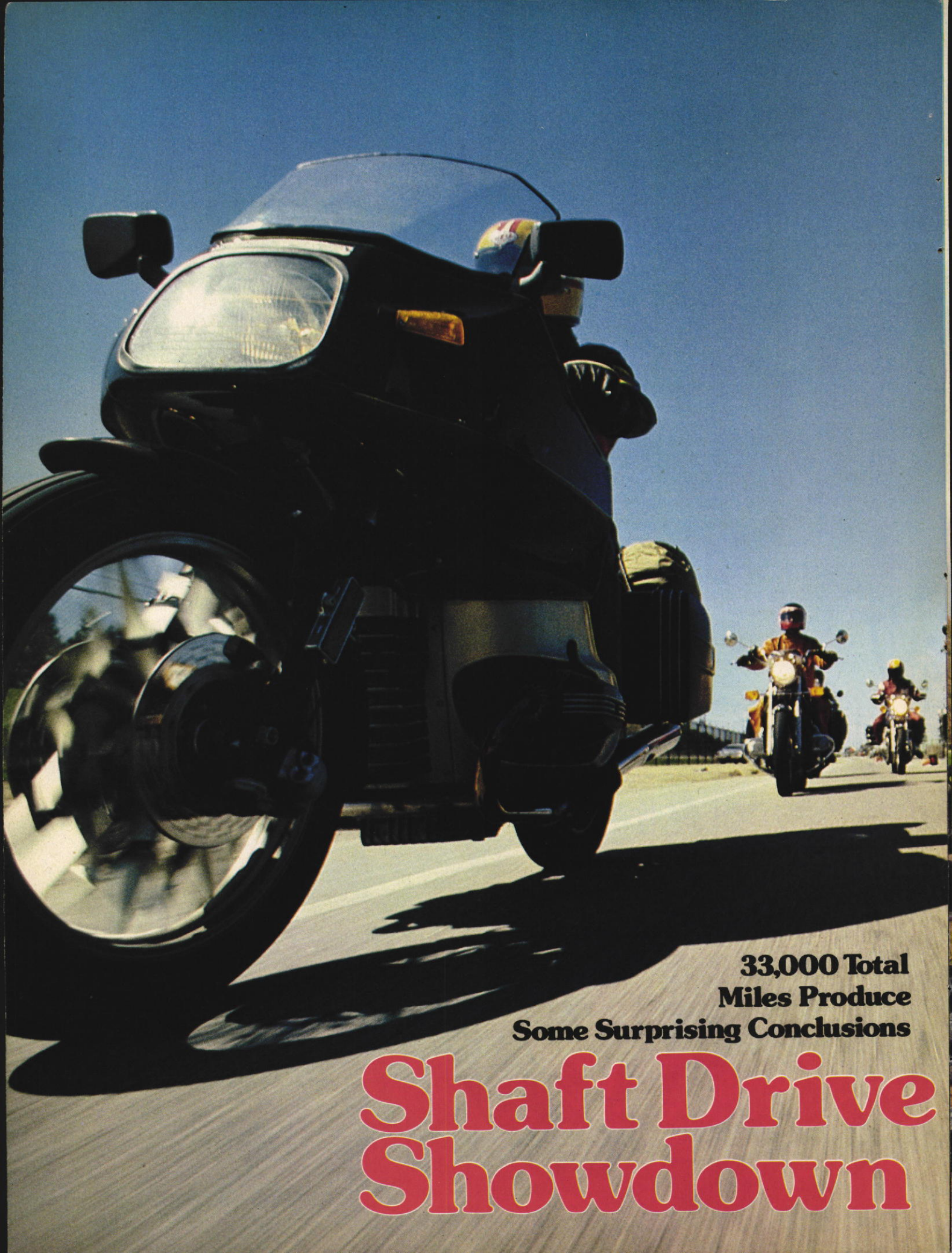
Looking good on two wheels also means looking out for the other guy, watching your speed and riding by the rules.

So ride by your Honda dealer and see the new CX500 Deluxe. It'll give your escapes a lot of style.

Always wear a helmet and eye protection. Model availability may be limited. For free brochure, write: American Honda Motor Co., Inc., Dept. M69CXD, Box 50, Gardena, California 90247. See Yellow Pages for nearest Honda dealer. © 1979 AHM.

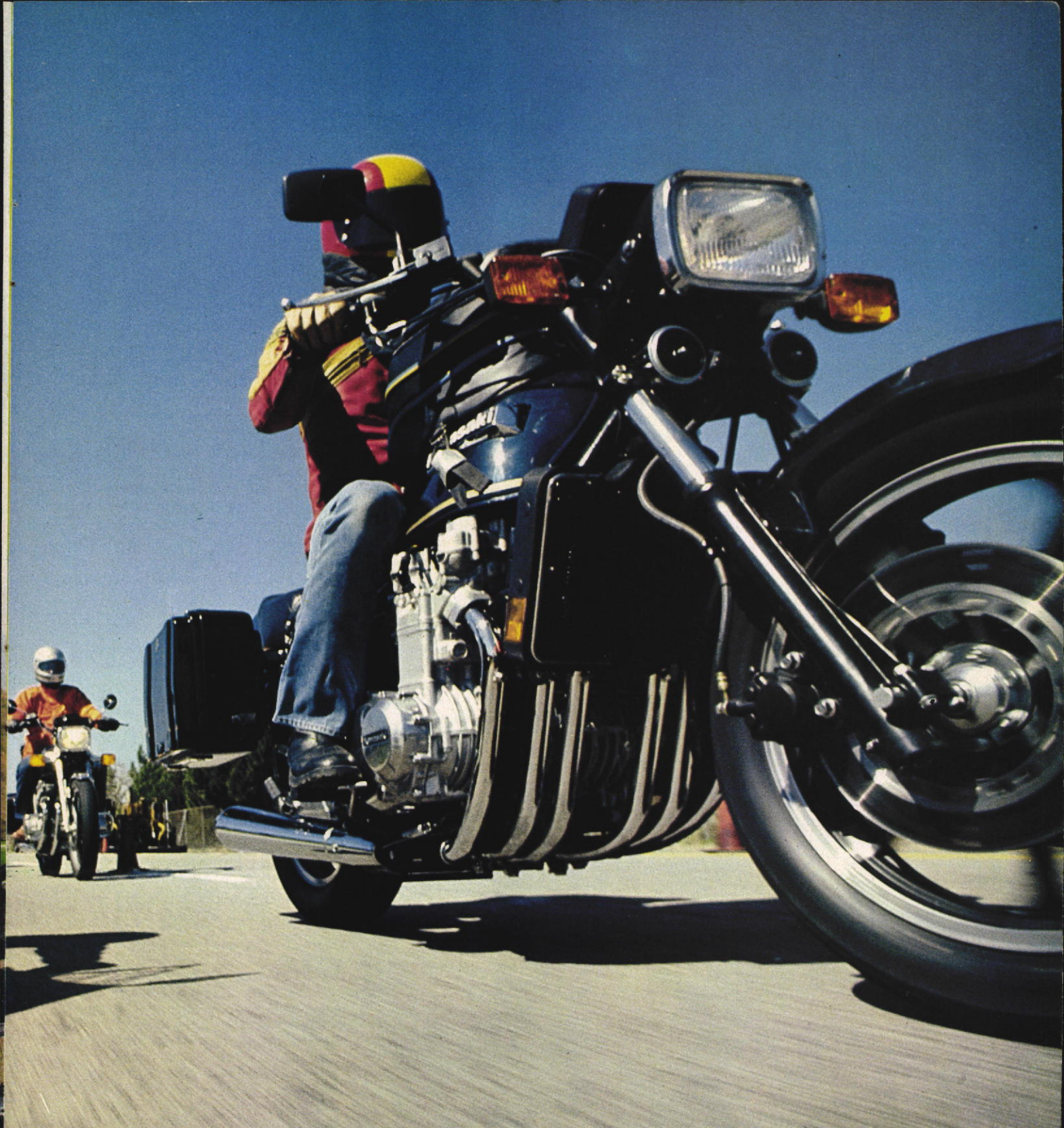
HONDA

GOING STRONG!



33,000 Total Miles Produce Some Surprising Conclusions

Shaft Drive Showdown



□ The road glides beneath you. The sky flows over you. The wind rushes past, bringing new smells and sounds. The horizon is a siren, beckoning. Once distant landscapes loom near, then drop away behind you. Beneath you, the machine hums and throbs, almost alive. It blends with you, telling you of the road and responding to your every whim. Uninsulated, you touch the world as you press through it, and, though bound to the ground, you're flying. In an age when travel is threatening to become a four-letter word, motorcycle touring is the last chance for adventure on the Interstate highways. The world looks different when you're not in

Shaft Drive Showdown

a glass-and-steel box, and it sees you differently too. That road out past the horizon is somehow more inviting and the surroundings more vivid from the saddle of an outbound motorcycle.

During the 1970s motorcycle touring has grown terrifically, and now is quite possibly the most popular facet of motorcycling. This growth is due not only to a larger number of people realizing the attractions of the open road on a bike, but also because of an improvement in the machinery available for touring. Since the late 1960s, road bikes have become increasingly comfortable, powerful and—especially—reliable.

The rider who sets out for a destination nine states away no longer has to consider Murphy's Law when packing tools and spare parts. The modern motorcycle has become as dependable as a car. Today's bike engines are built to keep running almost forever with little maintenance. The wicked-witch electrical systems which melted at the first sign of moisture—or the first full moon, whichever came first—are history. When vibration was engineered out of modern bikes, so were cracked pieces, disappearing nuts and bolts, buzzed-out batteries and a host of other minor failures.

Only two areas of potential trouble remain: tires and chains. Tire technology is making some strides towards puncture-resistance, like tubeless tires and self-sealing compounds. Chains, too, have improved by leaps and bounds. But there's still the occasional need for adjustment, the mess and minor hassle that goes with lubrication, the problem of correct wheel alignment when the chain is adjusted or the wheel removed, the need to periodically replace chain and sprockets, some added noise and the remote chance of on-the-road failure.

Because of these problems, an increasing number of road riders are making a shaft final drive the first requirement when buying new machines. Shafts have the drawbacks of more weight and altered handling habits when compared to chains, but these riders say they feel these shortcomings are more than offset by the reduced maintenance requirements and extra security they get with shaft drive.

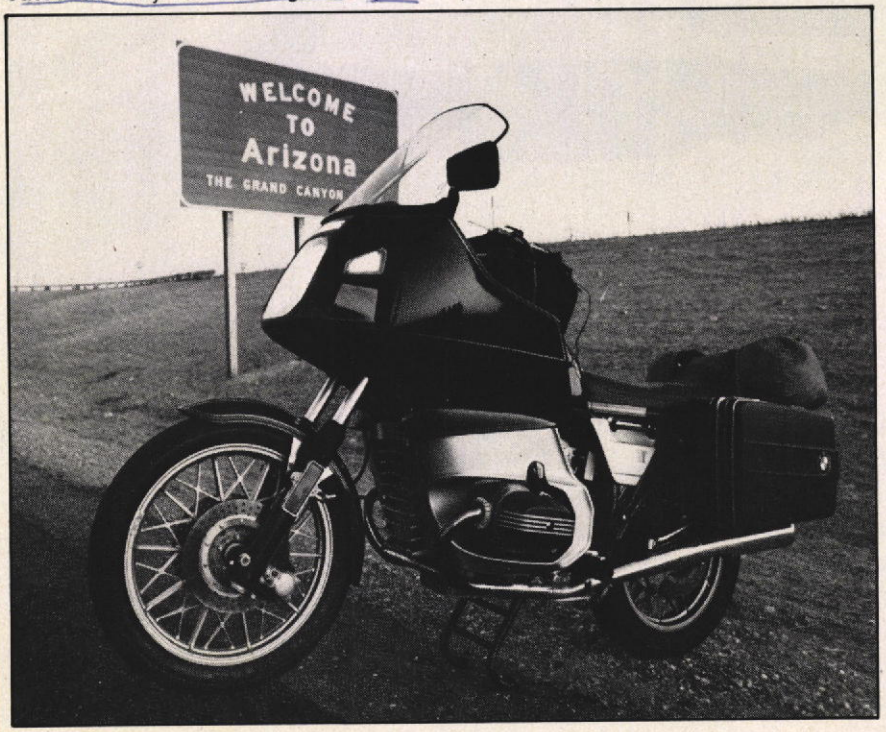
Shaft drive was originally the exclusive property of a few touring-oriented manufacturers, notably BMW. When Honda built a pure touring machine, the GL1000, it was also shaft driven. It wasn't long before the other Japanese manufacturers realized the attraction of driveshafts and began to produce touring-oriented machines with shafts instead of chain final drives. Yamaha was next. Now the 1979 lines of Suzuki and Kawasaki have drive-shaft equipped tourers.

There are considerable differences in the layouts and design philosophies of the big shaft-drive machines, but they all share a common intended use and they beg for comparison, so here it is. We had neither the manpower, the time nor the space to include every shaft-drive machine made, so we set an 800cc lower limit

BMW R100RT

If you love tradition, the BMW has it. Based on a decades-old design which has been honed, refined and updated constantly, the R100RT is in many ways the high-point of the horizontally-opposed design. With its bore enlarged to 84.8mm, the engine displaces 972cc. The simple two-valve pushrod twin with its two 40mm Bing constant-velocity carbs makes the BMW the least complicated and by far the lightest (563 pounds) of the big shafties.

The longitudinally placed engine is a natural for use with a shaft drive; no right-angle bends are needed to plug the transmission into the drive shaft. The large flywheel on the rear of the one-piece forged crankshaft carries the single-plate dry clutch with its diaphragm spring. A ramp-type shock absorber is located in the transmission's input shaft which is driven by a helical gear with a 1.5:1 reduction. The output shaft plugs power directly into the final drive shaft via a U-joint and another shock damper. The 1979 BMWs have a new torsion damper in the drive shaft.



As a result of racing experience, BMW has fitted an Oldham coupler to the front of the cam to isolate the ignition (still points, unfortunately) from camshaft flex. Other changes include O-rings at the cylinder bases, a single-row cam chain with its own tensioner, beefed-up gearbox housing, new handle-bar switches, new grips (at last!) and a dual-bulb taillight. The BMW is the only bike with a truly complete toolkit (including everything necessary to fix a flat) and a cable lock as standard equipment. It also has a quartz-halogen headlight and the biggest fuel tank. It lacks the Japanese bikes' quick and easy fork lock and a good stand.

The RT includes a fairing, Krauser saddlebags, a small luggage rack and a heel-and-toe shifter as standard equipment. The fairing is essentially a fuller version of the terrific RS fairing. The RT's fairing includes a taller, adjustable windscreen, two 6-liter storage compartments (which BMW is pleased to call locking), two adjustable wind vents, a clock, a voltmeter and provisions for mounting a radio.

The Krauser bags were the best on the trip: roomy but not bulky, light but not flimsy. They're detachable in an instant, waterproof, handsome and can hold any helmet. Our only complaint was that the chrome brackets flexed a little.

The bags and fairing add a modest 36 pounds to the bike over the unadorned R100T. More importantly, these extras raise the price from the T's $4930 to a breath-taking $6345, making the RT America's most expensive street bike.

for this test, a limit which would allow us to include machines from each of the top five companies manufacturing them. BMW, the original, makes several models using the same 1000cc engine. We chose the newest model based on that engine, the RT. Honda's GL1000 Gold Wing was the next most obvious choice. Yamaha's XS1100F, their touring model, was the next on our list. The awesome six-cylinder Kawasaki KZ1300, the Boeing 747 of motorcycle touring,was also essential. As the biggest, fastest machine in this class, nothing could be resolved without it. Kawasaki was the only manufacturer from which we took two machines. The new KZ1000ST has given the KZ1000, already a proven open-road runner, the one thing that some people thought it lacked, a shaft instead of a chain. We debated including the Suzuki GS850, that company's new shafty. It was at a displacement disadvantage and, we suspected, a performance disadvantage, but we thought it might do well enough in other areas to hold its own. That turned out to be more than true.

Our testing wasn't the usual weekend fling done by some magazines in similar tests. Not even a four- or five-day trip to some prominent landmark at the other end of the state. No, the Shaft Drive Showdown was a coast-to-coast-to-coast, eight-state 5300-mile trek from our Los Angeles headquarters to Motorcycling's Annual Spring Carnival, Motorcycle Speedweek in Daytona Beach, Florida. In the process we recorded a total of over 33,000 miles, a record for a single magazine test, and more testing miles than some magazines record in an entire year. There were no chase vans. No contingency escape plans. No breaks for bad weather. Only six riders and six bikes with saddlebags. If a bike broke beyond continuing, we would have left it behind—and it would have placed last.

Upon returning, the bikes were tuned up and then subjected to a full-scale thrashing during a battery of tests at Orange County International Raceway.

From the Road Captain's log: *All good things must come to a beginning, and so has this trip. After months of arrangements and preparation, a day's delay when a bike arrived late and a last minute rider replacement had to be arranged, we are On The Road. Injuries, family problems and other magazine business have caused some of those originally scheduled to participate to cancel out. Staffers Cox, Karr and Friedman are joined by: Joe Minton, an instructor at L.A. Trade Technical College's Motorcycle Mechanics course; Maurice Brouha, an experienced enthusiast; and Jody Nicholas, a former* Motorcyclist *Staffer and ace racer.*

By the time we had finished with some group photography, it was noon, so the scheduled first day's back-roads route was abandoned in favor of the more direct Interstate 10 to Phoenix. By the time we'd passed Palm Springs, we were getting a little antsy and began pairing off for roll-on acceleration contests. Rich and Maurice were on the 1100 and the 1300 and were still accelerating on the unhealthy side of 100 mph when a police car came down an on-ramp just in front of them, lights flashing. Maurice dutifully followed the officer off on to the center median. But the

Honda GL1000

When Honda designed the Gold Wing they set it up to use the same tooling as their water-cooled generator. It makes sense. The horizontally opposed, liquid-cooled OHC four-cylinder engine is designed for uses somewhat like a generator: long-running periods at steady speeds with little maintenance. The motorcycle is unmistakably a pure tourer: big, smooth, water-cooled, heavy (693 pounds with bags, luggage rack and engine guards) and shaft-driven.

The engine's layout makes the bike ultra-smooth, but it also creates compromises in cornering clearance and suspension. Features abound: The overhead cams are driven by toothed rubber Gilmer belts. Four 31mm constant-velocity carbs tucked under the dummy "tank" meter fuel. The transmission is located under the crankshaft to reduce length. By spinning the alternator in the opposite direction from the engine, Honda has eliminated virtually all the problems with engine torque reaction such as experienced on the BMW. One old-fashioned item in the engine is the ignition's breaker points, driven by the rear of the left camshaft. The fuel pump is driven by the right cam.

The fuel pump is necessary because the 5.1-gallon gas tank is located beneath the seat and the bottom of the tank is below the carbs so gravity feed is impossible. The "tank" you see opens on the top and sides to permit access to tool trays, several storage areas and electrical components including a terminal for hooking up accessories. One position on the ignition turns off power to everything but the accessory jack, so you can play your radio when stopped. Fuel, water temperature and voltmeter gauges mount atop the dummy tank. To fill the real tank, you unlock the dummy tank top and remove the filler cap. The GL1000 was the easiest of the six to fill to its full capacity. The bike rides on light-weight aluminum ComStar wheels on both ends now, and like all the other five except the BMW, the rear wheel is a 17-incher.

For 1979 the GL has been given a new CBX-style dual-bulb taillight, rectangular turn signals, a new front brake fluid reservoir (harder to vandalize), new one-piece front brake discs and new handlebar levers. When used below 40 mph, the turn signals click, above 40 mph the clicking is replaced by a beeper. A quartz-halogen headlight is standard.

There's finally Hondaline luggage for the Gold Wing. Our bike was fitted with saddlebags ($190), a rack ($33.98) and engine guards ($34.95). A trunk and backrest are also available. We rated the detachable Hondaline bags second to the BMW/Krauser luggage only because the Honda bags were a little bulkier and took longer to detach or mount. They're very roomy and big enough to hold a helmet. The trunk also detaches and both bags and trunk are interchangeable.

PHOTOGRAPHY: DALE BOLLER, ART FRIEDMAN, PAT BROLLIER, MIKE LEVASHEFF

Shaft Drive Showdown

cop apparently had more important things to worry about, because he just spun around in the dirt divider and headed west in the opposite lane. However, it took Maurice awhile to feel secure whenever he got over 55 mph.

The first thing we all wanted to find out about was power, and that first day's ride was spent discovering that. Our primary concern was for the kind of power you use in the real world—high-gear torque and acceleration from legal speeds while passing slower trucks and cars, with loaded motorcycles. Predictably, the Kawasaki 1300 and the Yamaha 1100 walked away from the others in this kind of comparison. The XS1100 had a slight edge over the 1300 in all acceleration contests at speeds likely to be used on the highways in both high-gear roll-ons and through-the-gears races. The 1100 pulled out a bike length or two up to 90 or 95, at which point the 1300 would edge slightly ahead.

The second-fastest pair were the BMW and KZ1000ST, which seemed quite equal in fifth-gear roll-ons. In through-the-gears acceleration contests at high speeds the KZ1000 quickly pulled away from the Beemer.

The Gold Wing and the GS850 were quite closely matched, both in fifth-gear-only and through-the-gears acceleration. They had less fifth-gear pulling power than any of the other bikes, but would pull away from the BMW in through-the-gear races.

After the trip, we conducted the usual standing-start quarter-mile acceleration tests—with saddlebags still intact. Here the 1300 had a chance to use its extra top-end power. As the accompanying charts and graphs show, it edged out the 1100. The KZ1000 was third-quickest, and the BMW was slowest, behind the Honda and Suzuki, which were tied for fourth, a second slower than the KZ1000ST. Even though empty, the saddlebags seemed to have slowed the bikes by about two or three tenths of a second through the quarter-mile.

We also conducted a simulated high-speed passing test. Each bike rolled down the strip at an actual and exact 50 mph. As it passed a pylon 200 yards from the speed traps, it accelerated at full throttle through the lights, using only fifth gear. Each bike made three passes, and the accompanying charts show the average terminal speeds. The Yamaha was the fastest and the BMW jumped to third, just barely faster than the KZ1000. The Suzuki was distinctly slowest.

From the Road Captain's log: *The early March weather has made the Widder Lectric Vests everyone's favorite accessory. Snowmobile suits, Apple Warmers and Hydron Snowmobile mittens or Bates and Hondaline gloves are keeping everyone comfortable even though the temperatures are in the 40s and dipping into the 30s at night.*

We started the second day with a brisk ride through some fast, twisty roads in the mountains east of Phoenix. Every one of the bikes could be made to wobble, wallow or wiggle at

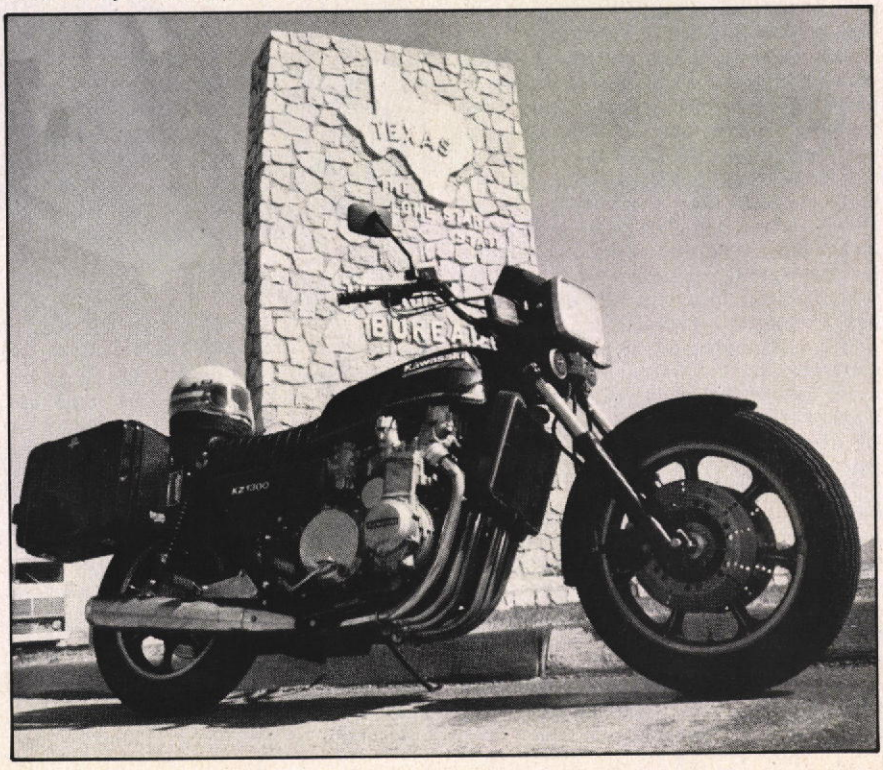
Kawasaki KZ1300

As the largest, heaviest (733 pounds with saddlebags), newest, fastest (top speed near 140 mph), biggest (1286cc) and most complicated, the KZ1300 was the most conspicuous of these six big shafties. As impressive as it appears externally, the liquid-cooled six-cylinder engine is even more dazzling inside. Except for the 231-watt alternator on the crank's right end and the Lanchester torsional damper on the left, everything in the engine is driven through two jackshafts. The main one, driven by a link-plate chain from the crank, spins both camshafts, the clutch and the second jackshaft. This second shaft drives the electronic ignition and the water pump. All these shafts are connected with link-plate chains. Kawasaki has reduced drive-train weight and complexity by using just two transmission shafts and powering the drive shaft from the end of the transmission output shaft. The bevel gears which divert power to the drive shaft run in engine oil and the drive shaft uses a standard Hooke-type U-joint. Drive-train shocks are absorbed by two spring-loaded ramped couplers (one in the primary jackshaft and one in the transmission output shaft) and two rubber dampers (in the clutch and rear wheel).

The top end features a conventional two-valve-per-cylinder layout fed through long, winding intake manifolds cast integrally with the head. At the end of the manifolds are a trio of Mikuni constant-velocity carbs, each with two 32mm throats. Each carb's pair of slides is controlled by a single vacuum diaphragm.

The chassis holds few surprises except for the rear shock attachment. Instead of mounting to the swingarm, the shocks bolt to the differential housing on the right and the brake caliper bracket on the left. The rest of the bike is just *big:* burly swingarm, huge (41mm) stanchion tubes for the long-travel air-assisted fork, long roomy seat. Electrical goodies include a quartz headlight, four-way flashers, on-off switch for the turn signals' self-cancelling feature and a semi-secret cut-out switch for the whole electrical system, to stall thieves.

The only saddlebags we knew of to fit the still new 1300 were Pacifico's Shadow Royale "universal" detachables. The Pacificos are a little bulky, won't hold a Bell Star helmet and wiggle a little bit; but they are the only truly universal saddlebags around. They were easy and quick to bolt to the bike and once mounted the prop-up-to-pack and detachable features made them extremely convenient to use. At $235, the Pacificos are also quite a bargain.



less than 90 mph. We can thank the saddlebags for that.

Once out of the mountains, we kept up a fast pace on back roads until we rejoined I-10 at Lordsburg, New Mexico. We then fell in with some fast-moving trucks for a rapid ride through El Paso to Van Horn, Texas. During dinner at a truck stop, Jeff entertained us by taking a bath in his food.

On those cold mornings, the Gold Wing left us cold. The Honda took an inordinately long time to warm up enough just to get out of the parking lot. Then it had to be ridden about ten miles before it would respond to throttle the way it was supposed to. A good five minutes of warm-up was needed before it would even pull out without stalling. One rider termed its cold-running habits "dangerous." The Suzuki needed about three minutes to warm up and the Eleven took a couple of minutes. The BMW and KZ1000 warmed up reasonably quickly and the 1300 was ready to go instantly.

Even when warm, the Honda was still the worst in terms of throttle response. Lean mixtures have made the GL's throttle response uneven. When you open the throttle at cruising speeds, there's a moment's hesitation before the engine responds. If you open the throttle slowly, the bike actually slows down before it accelerates. The engine always felt like it was running right on the edge of missing without quite doing it. A questionaire filled out by all riders asked if the riders were aware of any flat spots. One Honda reply read, "the whole powerband is a flat spot." Several noted that the Gold Wing's powerband, which is somewhat peaky, just isn't what you'd expect on a tourer.

The bigger Kawasaki showed a little bit of hesitation when the throttle was blipped for a downshift, as if the engine couldn't respond quite that fast. This often caused lurchy downshifts. There was also a little hesitation when the throttle setting was changed, a characteristic which the XS1100 echoed. The 1100's low-speed power has been noticeably reduced since early 1978 models, although mid-range power is reportedly greater. There's more of a surge of power at about 3500 rpm. The KZ1300 has a powerband as wide and flat as Texas.

A major complaint with the BMW was its detonation. When accelerating below 4000 rpm, the pinging was audible even from the bike next to it. Once we gained some altitude, the BMW richened up enough to stop detonating. The RT is at its smoothest and strongest above 4000 rpm, but that is well over the legal speed limit in fifth gear. The Bings responded more cleanly than the other CV carbs (on the XS1100, GL1000, and KZ1300) in the test.

The Suzuki's throttle response and power characteristics got generally high marks, even better than the more powerful KZ1000's. Both these bikes were rated as the easiest to ride smoothly in traffic.

On the mountain roads, the abrupt throttle response of the GL1000, KZ1300 and XS1100 provoked criticism because it made it difficult to corner smoothly while adjusting your speed. On the Yamaha, mid-corner speed changes were made even more difficult by a combination of a great deal of drive-train lash, the uneven throttle response and the

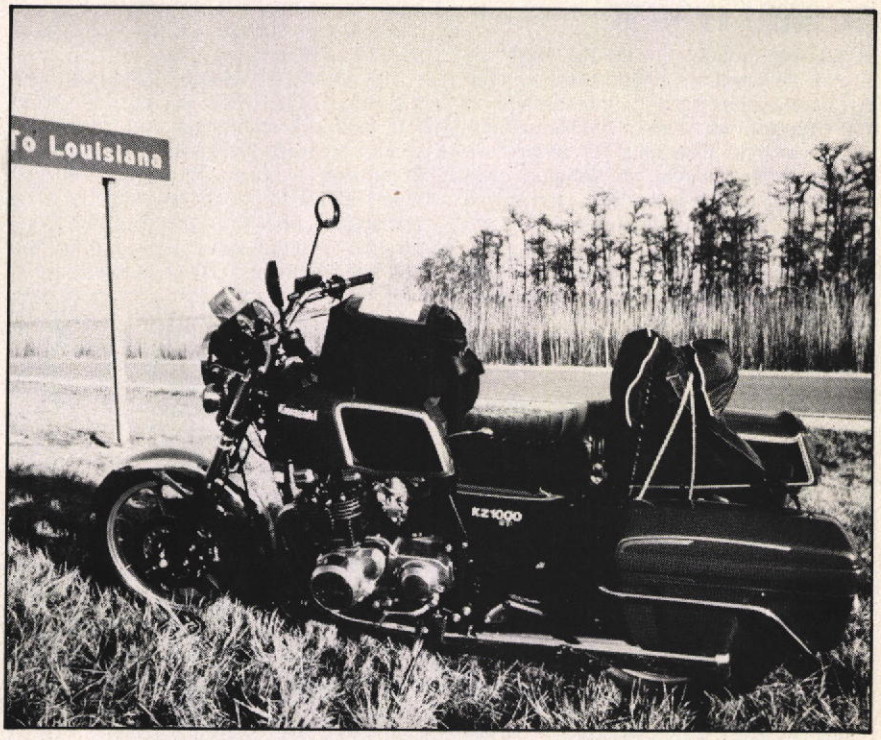
Kawasaki KZ1000ST

"If we'd had these three years ago, we wouldn't be number four now." That was what one Kawasaki dealer had to say about the KZ1000ST. Worries about chain drive kept many touring-oriented buyers away from the Z1/KZ1000 machines. Now there is a KZ1000 with shaft final drive.

Kawasaki started with the same DOHC KZ1000 engine now in the quick Mk. II model and rearranged the driveline to accept shaft drive. The engines have the same cam profiles, valve sizes, internal transmission ratios and beefed-up crankshafts. Power characteristics are changed only by the ST's bigger airbox and low-slung (to clear saddlebags) dual mufflers.

The extra weight and gears in the shaft-drive mechanism consume some power, but Kawasaki adapted the drive shaft without adding any jackshafts to the transmission. A ramp-type shock damper and a pair of bevel gears were added to the end of the countershaft. They run in the same oil as the rest of the engine and transmission.

The big differences between the ST (also designated the E-1) and the Mk. II is in the chassis. The ST has a leading-axle fork with 40mm (instead of 36mm) stanchions and more travel, a different front brake master cylinder, one more degree of rake, 12mm more trail, 1.8 inches more wheelbase, a tapered roller-bearing steering head (like all the other bikes in this test), different shocks, a smaller (17 inch), wider rear wheel, better, tubeless tires, a bigger battery and (according to Kawasaki) 22 additional pounds. With saddlebags our KZ1000ST weighed in at 630 pounds wet. The ST is also styled with its own handlebar, 4.9-gallon fuel tank and stepped seat. In short, it's a different motorcycle with the same engine.



Kawasaki is in the process of introducing a full line of touring gear for its new touring bikes. Nothing was available yet for the 1300, but we arranged to have the ST equipped with Kawasaki's saddlebags, which are manufactured by Ancra. Although a tad small, these were our favorites among the non-detachable bags on the trip. They were perfectly color-matched and excellently finished. The wiring for the built-in turn signals (which double as rear running lights) was covered and protected and the bags were waterproof. On the minus list were the inability to hold a helmet and the reluctance of the right bag to lock. We'd also prefer for the lids to hinge rather than detach. The bags cost $144.95 a pair plus $84.95 for brackets. Ours were also equipped with carry-out liners ($10.95 each) and decals ($3.95). A travel trunk ($86.95) is also available.

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softly sprung fork which compressed dramatically when the throttle was closed. The BMW shared the soft suspension problem, but without the lash. This particular KZ1300 had quite a bit of drive-train lash, more than the other 1300s we've ridden, and when you had to roll off in mid-corner the lash produced a fair-sized lurch and bobble. Neither the KZ1000 nor the BMW had enough lash to cause any problem, and the Suzuki was virtually lash-free, especially at speed.

The GL1000 had an annoying amount of lash, but it didn't cause too much problem in that regard because nobody rode it fast enough through corners to care. Although it steers fairly lightly (unless you get on the brakes), the Honda was always the first to wobble and the first to run out of cornering clearance. The Gold Wing, referred to as the Lead Wing by one member of the group, got everyone's lowest marks for overall handling.

If the Yamaha's rider kept the throttle on, there was plenty of cornering clearance. Even with the throttle shut, clearance was respectable. But the Yamaha's soft suspension gave it an imprecise, mushy feel, and it was one of the first to wobble while cornering. The Eleven was somewhere in the middle in terms of handling ease. It was neither the heaviest nor the lightest.

The Kawasaki Six was long and steady. Its suspension is taut enough for a sure-footed feel and the bike doesn't drop much when the throttle is shut—which is fortunate because only the Honda has less available bank angle. It did wallow at high cornering speeds, but most of our tourers preferred its slow, stable handling to the Yamaha's.

We rated the BMW third best in handling. Its softly sprung, long travel fork creates a feeling of mushiness and requires the rider to set-up if he is going to really blitz a corner. Its cornering clearance, which changes drastically with throttle setting, averaged out about in the middle of this group, and since it was the lightest machine among the six it steered a bit more easily than most. The RT fairing cuts down on the amount of steering movement available for low-speed lock-to-lock maneuvering, but the aerodynamics provide noticeably increased stability at high speeds. A BMW owner who participated in the tour commented that the wiggles he experienced at high speed when his Krauser saddlebags are fitted to his bike were substantially reduced on the RT, apparently by the fairing.

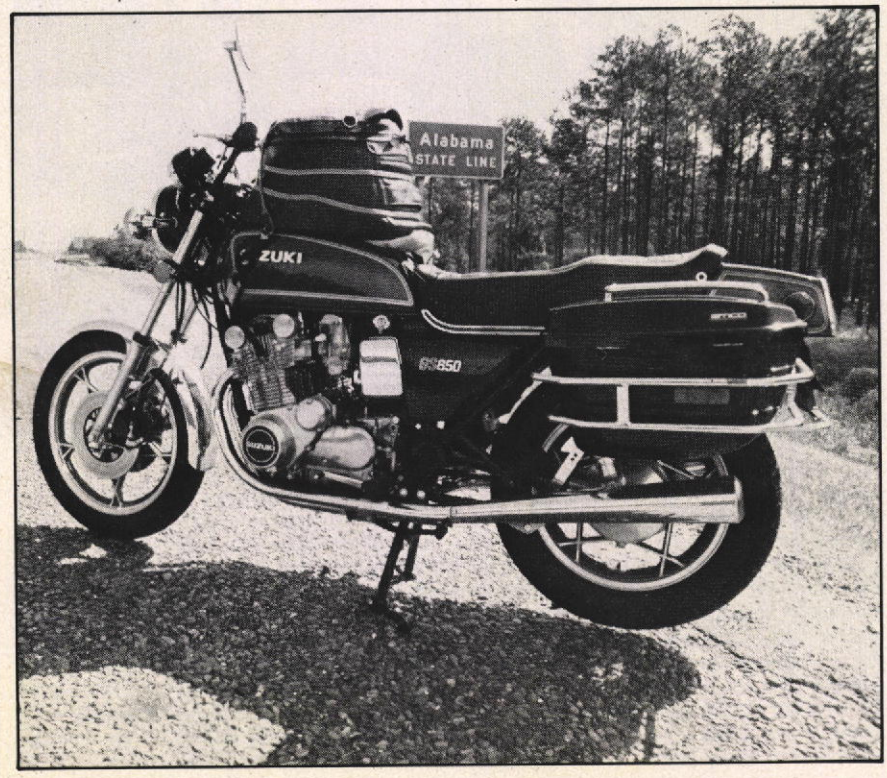
Although it steers heavily and is reluctant to turn while braking, the KZ1000 was the second-best handler of the six shafties. It's pretty stable once pitched into a turn, has about as much clearance as the Yamaha and Suzuki and shares the taut, definite feel of the 1300 with 100 pounds less mass.

Even with its awkward, heavy saddlebags, the Suzuki was chosen unanimously as the best handling machine on the tour. Although the saddlebags make it wiggly at high speeds, it still was the most accurate,

Suzuki GS850

At first we thought the GS850 might be in over its head. Its 843cc displacement just barely qualified it for membership in this club and we knew it had less passing power than Yamaha's 750 shaft-drive machine. For a while we debated even including it in the Showdown, but it had so many redeeming features, like comparatively low weight (636 pounds), top-notch suspension and a bias towards sporting riding, that we decided to include it. As it turned out, the "little" bike set the pace in many areas.

The GS850 inherited suspension like the Suzuki GS1000's: air-assisted front fork and adjustable-damping shocks. It shares a layout similar to the GS series Fours and is based on the GS750 with 4mm added to the bore diameter. The camshafts came from the GS1000. They provide shorter valve timing than the 750's for increased power at low rpm.



The drive train was modified with quieter helical gears, new transmission ratios and a lot of fiddling to accommodate the drive shaft without increasing the number of transmission shafts or bloating the transmission area. Drive-line shocks are cushioned by springs in the clutch, a spring-loaded ramp-type cushion between the clutch and transmission on the input shaft's left end and rubber bushings in the rear wheel. The bevel gears between the transmission and drive shaft run in their own oil, and the U-joint in the drive shaft is a standard Hooke type. It produces a shaft-drive drive train remarkably free of lash and lurches.

Of course, the drive-shaft mechanism adds weight over and above that of the GS1000. So do triple discs (shared with all of its competition in this test) and cast alloy wheels (used by all but the Honda). Since we weigh test machines with their tanks full, the 850's extra gallon of fuel capacity (its 6.3-gallon tank was the second biggest in the test) adds to its test weight, but contributes to its long touring range.

We fitted the 850 with a set of Amco saddlebags and were quite disappointed. The Amcos were hard to mount, were unnecessarily bulky, stuck out into the wind, didn't hold a Bell Star helmet, were hard to lock, had poor wiring which sometimes caused the right signal to fail, popped open when "locked," immediately shed the rubber molding designed to seal the bags, weren't particularly waterproof, didn't detach and cost a lot. This was an early sample of Amco's first attempt at making saddlebags, and we're told there will be some changes. They'll have to be fairly major before we'll recommend the Amco bags.

confident machine for swooping through the mountains. Like the KZ1000, it drops very little when the throttle is shut. In fact, it's easy to forget that the GS850 even has a driveshaft.

None of the bikes has any severe straight-line stability problems. The two Kawasakis are the most stable in side winds, etc. The Honda and the BMW are blown around the most by side winds and the wakes of trucks.

From the Road Captain's log: *Day Three was a lazy day, short of excitement until nightfall. We followed I-10 from Van Horn to Junction then took back roads into Austin. It was Sunday and many gas stations were closed. The open ones often have only regular and unleaded. On one long stretch, over 180 miles, the KZ1000, which has the smallest tank, ran out of fuel, and had to beg some from the BMW.*

While riding through wooded country after dark, we learned to appreciate certain aspects of various bikes' headlights. The KZ1000's headlight had been hit by a rock and burned out. Since it was a standard size and shape, we were able to replace it with an automotive one purchased from a gas station. Since it was Sunday night, it would have been virtually impossible to find a quartz-halogen bulb or one of the rectangular beams of the type used in the 1100 and the 1300.

But we appreciated those bright quartz lights in the BMW, Honda, KZ1300 and Yamaha when we came upon deer on the road, not once but three times. Jeff, who was riding well out in front at one point, persuaded a lone deer to get out of the road by backfiring as he passed it.

After our final gas stop, we ran into bears—the kind that write tickets. We were just getting ready to leave the gas station when the little Fox XK radar detector we'd brought buzzed and flashed. Since it was silent until then, we all looked around eagerly. A minute or two later the police car cruised into view. In the last 60 miles that night, the Fox XK alerted us to five radar-toting police cruisers. By the time we arrived at our hotel for a 10 o'clock dinner, we were calling it a police detector.

On those long sections of straight Texas highway, riders quickly began reaching conclusions about the riding positions, seats, bars, suspension compliance and overall comfort. From the discussion on the trip and the replies on the evaluation questionaire, it is quite apparent that comfort and ergonomics are highly personal. The following conversation will give you an idea.

Tester A: "It's my turn to ride the KZ1300 unfortunately."

Tester B: "What do you mean?"

Tester A: "Well, there's just no way to sit on it so I can be comfortable . . ."

Tester B: "You're out of your mind! That has the best riding position of all of them."

Tester A: "And its vibration really annoys me."

Tester C: "But it's the smoothest bike in the bunch."

Take the matter of riding positions. Both the BMW and the KZ1300 received ratings of best and worst from different individuals, although the twin averaged the second-highest rating, behind the Suzuki, while the Six's average riding position rating was only better than the Honda's. The Honda probably would have

Yamaha XS Eleven

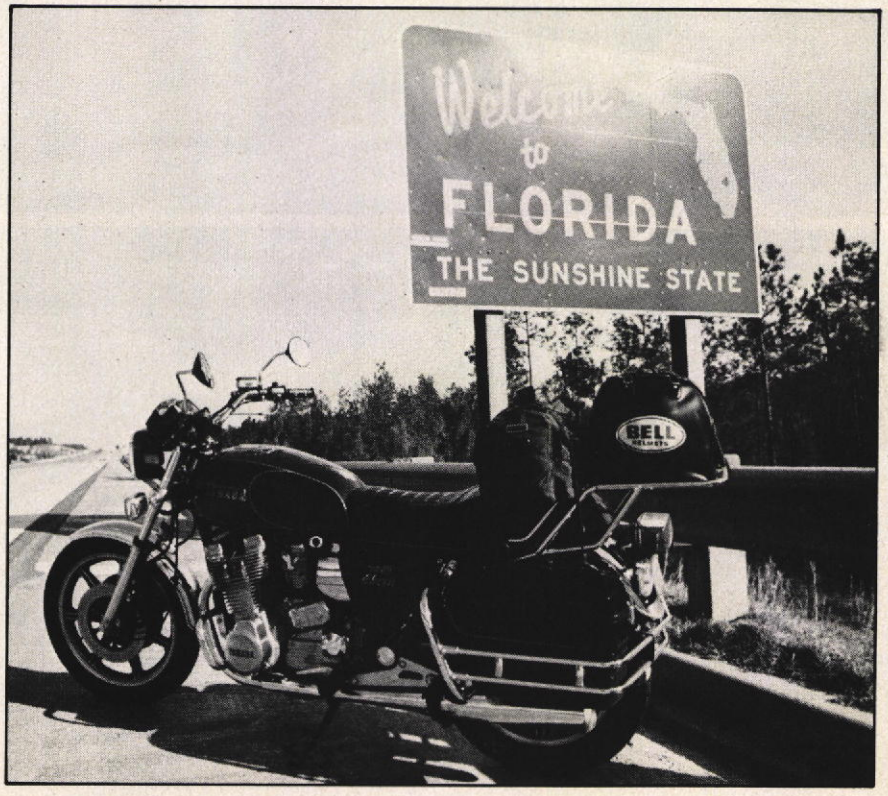
In many ways it was Yamaha who drew the pattern that the later shaft-drive bikes would follow. Yamaha was the first Japanese company to use shaft drive with a transverse engine. Yamaha introduced self-cancelling turn signals and original-equipment cast wheels in America. Yamaha was the first Japanese company to break the 1000cc barrier and offer electronic ignition fit for a moon shot. The company's willingness to innovate has given it an advantage in the road-bike market, and the XS1100 is a good example of the reasons for Yamaha's success.

Upon its arrival in late 1977, the Eleven immediately displaced the Gold Wing as King Tourer. Its power, comfort, comparatively compact-looking engine and shaft drive made it the first true Super Tourer. Its rubber-mounted, air-cooled, 1102cc engine is virtually a four-cylinder version of the DOHC 750 triple. Electronic ignition with its exclusive vacuum advance provides sparks and four 34mm Mikuni constant-velocity carbs feed the engine.

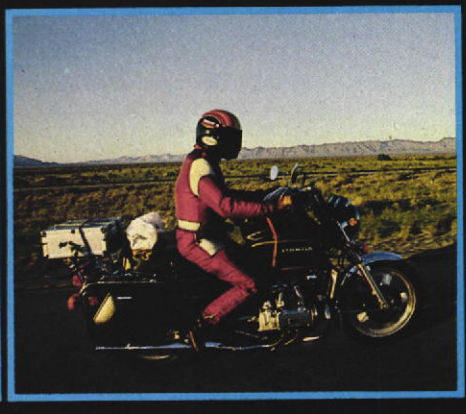
Power passes from the crankshaft through a link-plate chain to a primary jackshaft (which contains a cush-drive unit) through to the usual pair of transmission shafts to an output jackshaft. On the left end of this jackshaft are spiral-bevel gears which direct power to the drive shaft. The spiral-bevel gears are sealed in a separate case and run in their own supply of 90-weight gear oil. The drive shaft uses the standard type of U-joint.

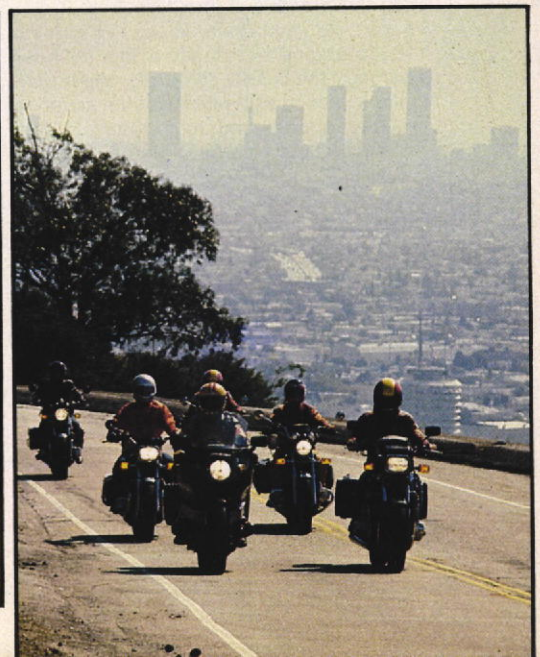
Changes this year include internal fiddling to meet emissions specs (and a resulting drop in low-speed power), a quartz-halogen headlight and a new seat, which we didn't like as well as the old one. Standard features include an accessory hook-up terminal, pre-loadable front fork springs, self-cancelling turn signals and dual-bulb taillight. One thing we missed was any sort of storage compartment for small items.

We fitted our test bike with Yamaha's case guards ($38.95) luggage rack ($44.95) and saddlebags ($270 with mounting hardware). The color-matched and pinstriped bags were roomy but bulky and didn't detach. The lids didn't fit properly and so the bags weren't watertight. There are two locks which must be fiddled with on each bag and the front ones were hard to reach. When searching for a change of riding position, one rider kicked a latch and the detachable lid flew off. A hinged lid would be better. We rated the Yamaha bags a poor fifth among the six used on the tour, ahead of only the Amcos.



Shaft Drive Showdown

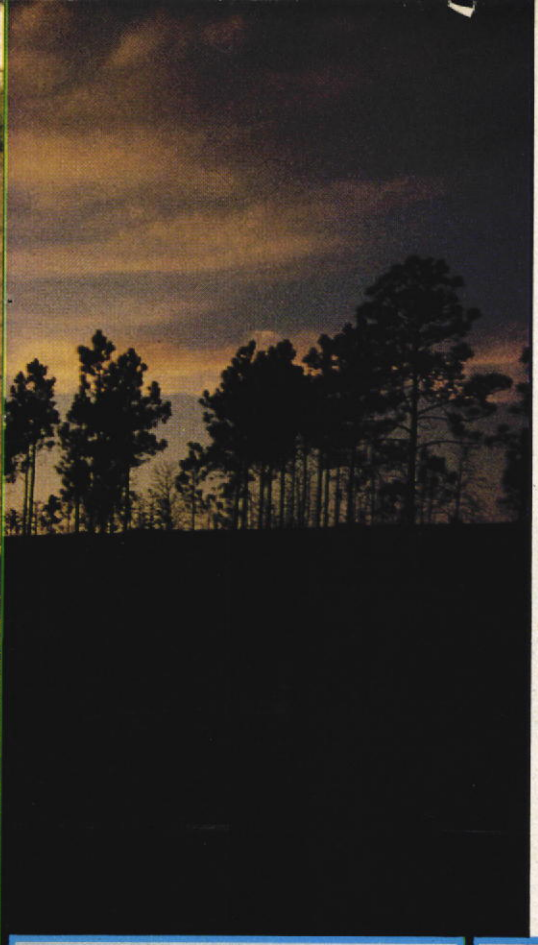


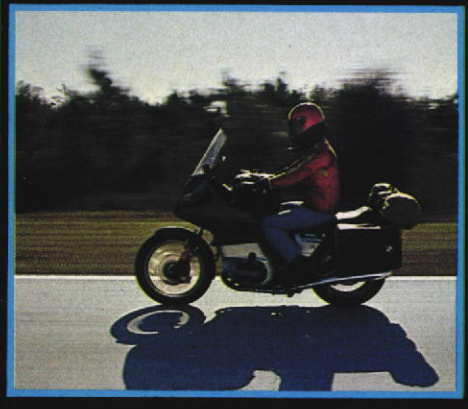


done better if it was equipped with a fairing. Without a fairing its bars, which also received a low average rating, were too tall and caused the rider to sit bolt upright in the wind. The BMW's riding position is quite different because of its low bars. "The BMW is just fine," read one tester's notes, "if you like riding like a German policeman—well forward and bolt upright." Riders cited everything from seat configuration to bar and footpeg placement for praising or criticizing a bike's seating position. The same features were sometimes picked as both a reason for liking and disliking that bike by different individuals. Reaction to handlebars was also equally mixed, except for the Suzuki, which got high marks all around, and the KZ1000, whose bars were the favorite. The BMW and Honda bars were least favored. Even those who like the lowness of the BMW bars found that they bent rearward too much for optimum comfort.

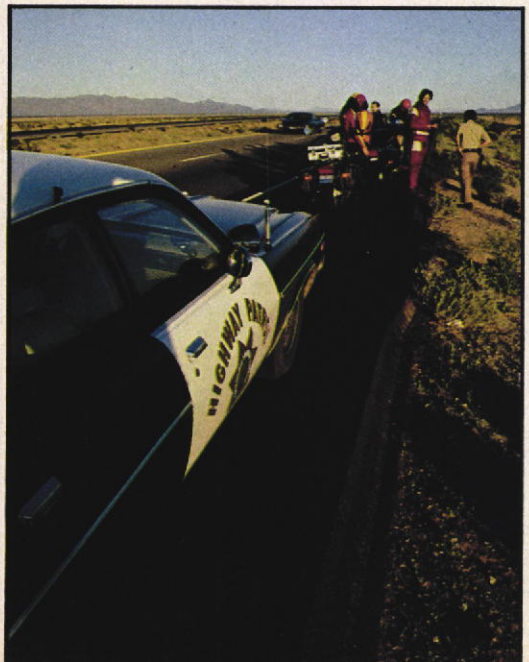
After days of bouncing through some of America's most wild and scenic potholes, the consensus of opinion was that the Yamaha's suspension gave the best ride. The Suzuki was a strong second, with both Kawasakis and the BMW closely matched for third best at smoothing out the bumps. Although all three of these bikes have plenty of travel, they lack the instant response necessary to cancel small bumps and larger square bumps before they reach the rider. The Gold Wing with its taut, short-travel suspension (necessary to permit a safe amount of cornering clearance with the GL's wide, low engine) gives the worst ride. Because of the extra unsprung weight of drive shafts, none of these machines rides quite as well on choppy roads as a smooth-riding chain-drive machine.

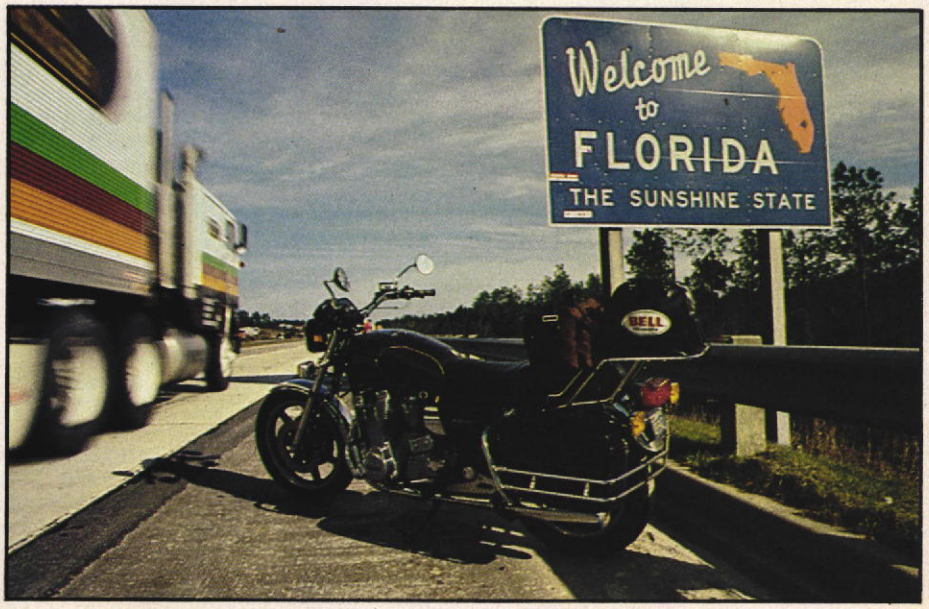
None of the big shafties has a vibration problem, although the Honda was strongly favored as the silkiest. The KZ1300 and XS1100 were closely matched as second smoothest. The 1300 had a slight vibration at exactly 4000 rpm which annoyed one rider, but its engine is otherwise naturally smooth. Rubber-mounting the XS1100's engine has isolated the rider from the engine's buzz (which you can feel if you put your foot on the engine). Only a low-frequency shake down near idle gets through. The Suzuki isn't as smooth as any of the





Below: Crossing the Suwannee River, departing L.A., encounter with a curious cop, arriving Florida. Nobody got a ticket . . . or even killed.



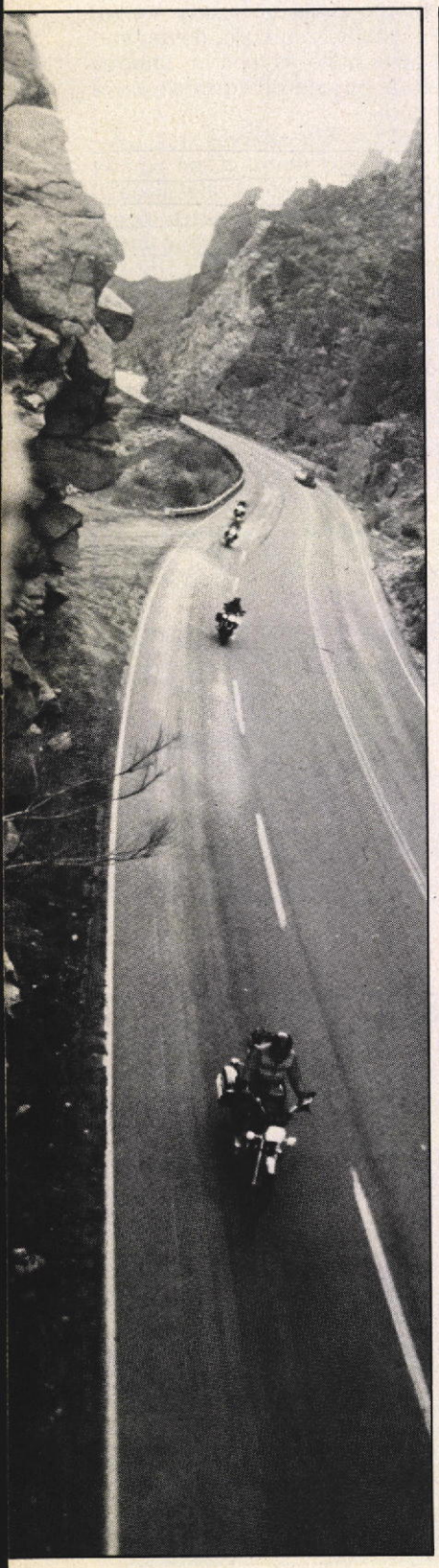


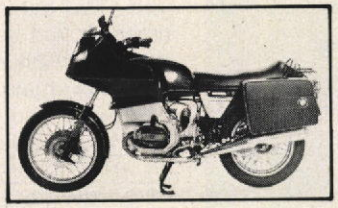
Shaft Drive Showdown

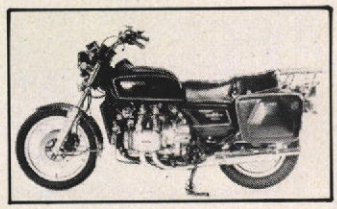
three super-smoothies. It buzzes noticeably at high rpm, but with significantly less magnitude than the Kawasaki four, which vibrates about the way Z-1s always have.

The BMW got the worst marks in the vibration category, and it also finished last in the seat evaluations. One rider rated the BMW's saddle second-best because the shape supported him perfectly, but everyone else rated it as one of the two worst. The problem is that the seat is just too hard. Two of our testers own or have owned BMWs and another has a 7000-mile trip under his belt aboard a Beemer. None of *those* seats felt as firm as this one. When we asked people at Butler and Smith about this, we were told that the firmness had been praised by previous tests. However, sources close to the BMW factory told us that this may be a prototype saddle which never should have been tested.

The seats on the GL1000, KZ1300 and KZ1000 were rated third, fourth and fifth respectively, but each one







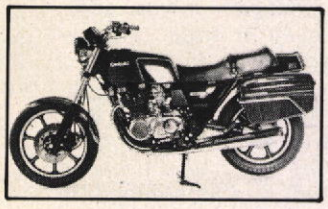
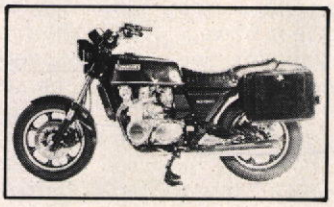
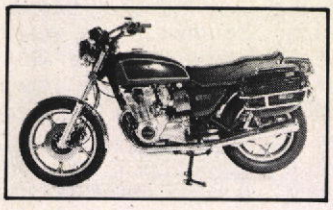
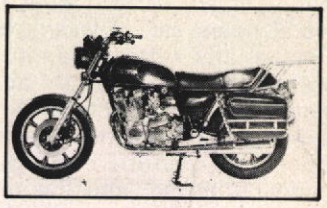
	BMW R100RT	Honda GL1000
Suggested retail price	$6345	$3698
Price as tested	$6345	$4057
Warranty	12 months, unlimited miles	6 months, 6000 miles
Number of U.S. dealers	500	1800
Cost of shop manual	$50.00	$8.50
Recommended maintenance intervals	5000 miles	7500 miles
ENGINE		
Type	Four-stroke horizontally opposed twin	Four-stroke horizontally opposed four
Displacement	980cc	999cc
Bore x stroke	94 x 70.6mm	72 x 61.4mm
Compression	9.5:1	9.2:1
Carburetion	2,40mm Bing slide needle	4, 31mm Keihin CV
Ignition	Battery with points	Battery with points
Lubrication	Wet sump	Wet sump
Battery	12V, 28AH	12V, 20AH
DRIVETRAIN		
Primary Transmission	Helical gear, 1.5:1	Link-plate chain, 1.409:1
Clutch	1 plate, dry	7 plates, wet
Final Drive	Shaft, 2.91:1	Shaft, 3.40:1
CHASSIS		
Fork	BMW 36mm, 7.0-in. travel	Showa 37mm, 5.8-in. travel
Shocks	Boge, 4.9-in. wheel travel	Showa, 3.4-in. wheel travel
Front tire	3.25H19 Metzeler Hille 12	3.50-19 Dunlop Gold Seal
Rear tire	4.00-18 Metzeler Touring Special	4.50-17 Dunlop Gold Seal
Rake/trail	28.5°/3.7 in. (94.0mm)	28°/4.7 in. (119mm)
Wheelbase	57.8 in. (1468mm)	60.8 in. (1544mm)
Seat height	32 in. (812mm)	32.0 in. (812mm)
Ground clearance	6.0 in. (152mm)	5.2 in. (132mm)
Fuel capacity	6.37 gal. (24.1 liters)	5.1 gal. (19.3 liters)
GVWR	881 lbs. (399kg)	1010 lbs. (458kg)
Weight as tested (wet weight)	563 lbs. (256kg)	693 lbs. (314kg)
Colors	Phoenix gold, red smoke	Black, dark blue, maroon
Instruments	Speedo, tach, tripmeter, voltmeter, clock	Speedo, tach, tripmeter, volt, fuel and water temp gauge
Headlight, wattage: hi/low	Quartz, 60/55	Quartz, 60/55
Alternator output	280 watts	300 watts
PERFORMANCE		
Quarter-mile	13.76 sec. @ 96.2 mph	13.30 sec. @ 101.9 mph
Fuel consumption	30 to 61 mpg, 50.2 mpg average	26 to 49 mpg, 41.7 mpg average
Average touring range	320 miles	213 miles
Oil consumption	1.6 qts./5000 miles	0 qts./5000 miles
RPM @ 60 mph in top gear	3457 rpm	3571 rpm
Speed in gears at (redline)	(7300) 1st 43.2 mph; 2nd 66.4 mph; 3rd 91.8 mph; 4th 113.8 mph; 5th 126.7 mph.	(8000) 1st 50.5 mph; 2nd 73.9 mph; 3rd 94.7 mph; 4th 115.0 mph; 5th 134.3 mph.
Speedometer error	30 mph, 26 mph actual; 60 mph, 53 mph actual	30 mph, 29 mph actual; 60 mph, 58 mph actual

suffered strong criticism from at least one tester. The Yamaha saddle was a strong second, but it might have done even better if it had been the old 1978 saddle. Those of us who have ridden Elevens with both the old and new seats recall the old one as being far more comfortable.

On only two comfort items did we agree unanimously. Everyone said the GS850 had the best seat. Everyone also rated the GS850 best in overall comfort. The Yamaha was a firm second with the KZ1300 and GL1000 nearly tied for a distant third in overall comfort. The ST and RT were close together not far behind.

A few miscellaneous comfort complaints appeared in rider's notes and conversations. The BMW was criticized for the traditional "Bing dings" where the carbs bump your ankles. And for its strong throttle return pressure. (Ironically, the government made BMW remove its old throttle damper screw a couple of years ago.) Some riders praised the warmth and protection offered to the feet by the cylinders on the BMW and Honda. The KZ1000's hard, slick grips provoked criticism from several riders in the group.

As the only bike with a fairing, the BMW was highly sought-after in cold weather. The rider felt at least 10 degrees warmer than on the other

Kawasaki KZ1000ST	Kawasaki KZ1300	Suzuki GS850	Yamaha XS Eleven
			
$3599	$4699	$2999	$3449
$3856	$4934	$3321	$3809
6 months, 6000 miles	6 months, 6000 miles	6 months, unlimited miles	6 months, unlimited miles
1170	1170	1600	1600
$12.95	$11.50	$17	$3
3000 miles	3000 miles	3500 miles	6450 miles
Four-stroke DOHC four	Four-stroke DOHC six	Four-stroke DOHC four	Four-stroke DOHC four
1015cc	1286cc	843cc	1101cc
70 x 66mm	62 x 71mm	69 x 56.4mm	71.5 x 68.6mm
8.7:1	9.9:1	8.8:1	9.2:1
4, 28mm Mikuni slide needle	3 two-barrel Mikuni CV	4, 26mm Mikuni slide needle	4, 34mm Mikuni CV
Transistorized	Transistorized	Battery with points	Transistorized
Wet sump	Wet sump	Wet sump	Wet sump
12V, 16AH	12V, 20AH	12V, 14AH	12V, 20AH
Straight-cut gears, 1.73:1	Two link-plate chains and jackshaft, 1.84:1	Helical gear 1.8:1	Link-plate, chain 1.657:1
17 plates, wet	16 plates, wet	15 plates, wet	15 plates, wet
Shaft, 2.29:1	Shaft, 2.65:1	Shaft, 3.1:1	Shaft, 3.261:1
Kayaba 40mm, 6.1-in. travel	Showa, 41mm 7.9-in. travel	Kayaba 37mm, 6.3-in. travel	Kayaba 37mm, 6.25-in. travel
Kayaba 3.9-in. wheel travel	Showa 4.7-in. wheel travel	Kayaba 4-in. wheel travel	Kayaba 4.25-in. wheel travel
3.50V19 Dunlop Gold Seal	MN90-18 Dunlop tubeless	3.50-19 Dunlop Gold Seal	3.50H19 Bridgestone SS
4.50V17 Dunlop Gold Seal	MT90-17 Dunlop tubeless	4.50-17 Dunlop Gold Seal	4.50H17 Bridgestone SS
27°/3.9 in. (98mm)	29.5°/4.01 in. (102mm)	28°/4.4 in. (113mm)	29.5°/5.1 in. (130mm)
61.0 in. (1549mm)	62.2 in. (1600mm)	59.5 in. (1511mm)	60.8 in. (1544mm)
32.8 in. (833mm)	32.2 in. (818mm)	32.0 in. (812mm)	32.6 in. (828mm)
6.8 in. (172mm)	5.8 in. (147mm)	6.3 in. (160mm)	6.4 in. (163mm)
4.9 gal. (18.5 liters)	5.8 gal. (22 liters)	6.3 gal. (24 liters)	5.6 gal. (21.2 liters)
1030 lbs. (467kg)	1178 lbs. (534kg)	1003 lbs. (454kg)	1090 lbs. (494kg)
630 lbs. (286kg)	733 lbs. (332kg)	636 lbs. (288kg)	643 lbs. (291kg)
Red, blue	Dark blue	Blue, black, maroon	Indigo blue, magenta red
Speedo, tach, tripmeter, fuel gauge	Speedo, tach, tripmeter, fuel and water temp gauge	Speedo, tach, tripmeter, fuel gauge, digital gear position indicator	Speedo, tach, tripmeter, fuel gauge
Sealed beam, 60/50	Quartz, 60/55	Sealed beam, 50/40	Quartz, 60/55
228 watts	231 watts	200 watts	280 watts
12.35 sec. @ 111.0 mph	12.13 sec. @ 114.1 mph	13.30 sec. @ 101.6 mph	12.19 sec @ 111.5 mph
30 to 53 mpg, 42.8 mpg average	22 to 43 mpg, 37.7 mpg average	30 to 47 mpg, 41.3 mpg average	30 to 52 mpg, 41.9 mpg average
210 miles	219 miles	260 miles	234 miles
3.2 qts./5000 miles	3.2 qts./5000 miles	6.3 qts./5000 miles	9 qts./5000 miles
3813 rpm	3457 rpm	4433 rpm	3830 rpm
(8500) 1st 51.5 mph; 2nd 74.5 mph; 3rd 97.7 mph; 4th 118.2 mph; 5th 133.7 mph.	(8000) 1st 57.0 mph; 2nd 77.5 mph; 3rd 101.0 mph; 4th 120.3 mph; 5th 138.8 mph.	(9000) 1st 46.8 mph; 2nd 65.8 mph; 3rd 84.8 mph; 4th 104.0 mph; 5th 121.8 mph.	(8500) 1st 53.6 mph; 2nd 73.7 mph; 3rd 93.2 mph; 4th 116.0 mph; 5th 135.8 mph.
30 mph, 30 mph actual; 60 mph, 57 mph actual	30 mph, 29 mph actual; 60 mph, 57 mph actual	30 mph, 29 mph actual 60 mph, 58 mph actual	30 mph, 30 mph actual; 60 mph, 57 mph actual

Shaft Drive Showdown

bikes. It was also handy when following trucks carrying gravel or recently fed pigs or if the driver in front of you was chewing tobacco. You didn't get quite as wet when riding the BMW as you did with other bikes, but you still needed a rainsuit. In warm weather the built-in vents help keep you cool, but they weren't nearly enough when the weather was hot.

The RT's windshield has a small amount of adjustment built into it. Several riders said it wasn't enough to make any difference, but they were always the first to adjust it when they got on the bike. Adjusting the windshield permitted the rider to reduce the amount of turbulence around his helmet and the resulting noise. One rider cited this turbulence as the fairing's worst feature, although he admitted it was less than on any other touring fairing he'd ridden behind. Almost everyone complained about the "eye-hurting" distortion in the windshield, and this was a particular problem for shorter riders who couldn't look over the windshield comfortably.

As with all fairings, there's an increase in noise and resonance. This makes the BMW the noisiest of these bikes to ride, but the amount isn't objectionable.

The BMW fairing is light enough that it doesn't hurt handling the way other touring fairings often do, and there seems to be a handling benefit at high speeds. Maintenance time will be increased because the fairing gets in the way.

From the Road Captain's log: *The countryside is changing. The barren Southwest gave way to the lush vegetation of the Southeast as we worked our way down through Houston and into Louisiana.*

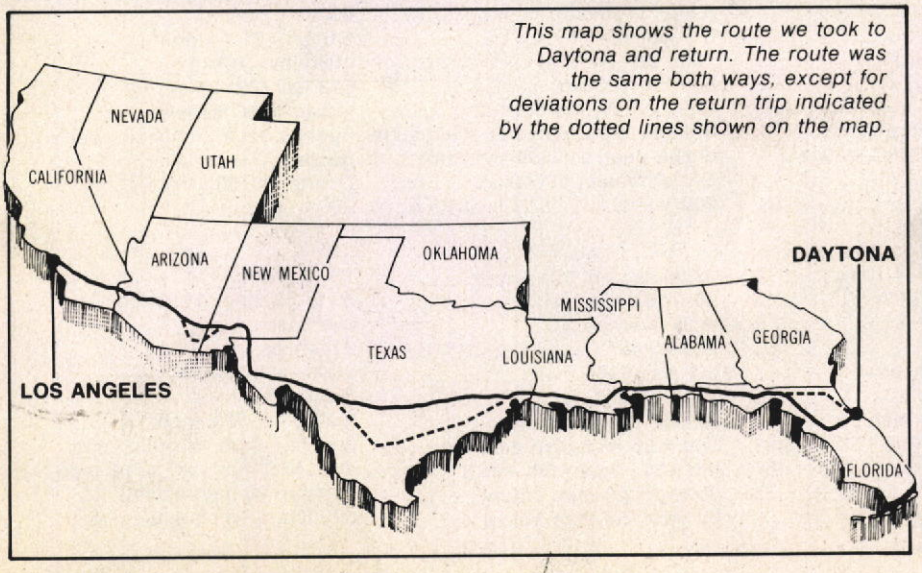
Riding in a group has definite disadvantages. You can only travel as fast as the slowest member of the group. Even simple stops turn out to be long affairs. If we stop just to change bikes after a jaunt of 100 miles or so, helmets come off, smokers light up, conversations start, someone goes to find a place to relieve himself and someone else decides he wants a sweater located at the bottom of his saddlebag. A thirty-second stop quickly turns into a 15-minute delay. And you should see us in gas stations. We all fill from the same pump, noting the exact amount and price required to fill each bike. Six bikes make quite a crowd, and take a while to fill by the time tank bags are removed and replaced. Some service station attendants look very nervous as the hose is passed from bike to bike, especially since only three of them have license plates. At busy stations we invariably cause a traffic jam. Gas breaks take forever because they are also an opportunity for snacks, soft drinks, coffee, changes of clothing, BS sessions and map examinations. If you compute the time used at stops, our average speed rarely tops 45 mph.

Of course, a group provides security if you break down, and tools and spares can be spread out among all six bikes, making each bike's load a little lighter. And we do manage to entertain each other by backfiring, pantomiming, turning off the other guy's kill switch or fooling with each other's controls. Sneaking up in someone's blind spot and leaning on your horn is also amusing.

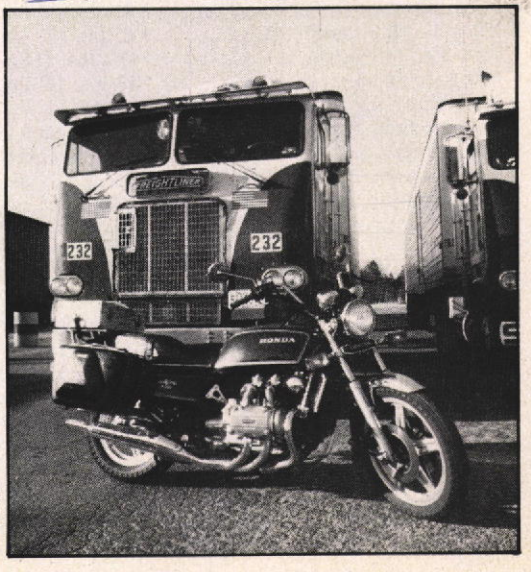
Today I was taking pictures as we rode. When the roll was used up, I started to reload by grabbing a handful of throttle, speeding up, then performing one reloading step as the bike slowed down. Seeing my situation, Jeff came up next to me and reached over with his left hand to operate my throttle and steer my bike while I finished reloading, which took about a mile.

In Houston, Joe became separated and took a wrong turn at a major intersection, thereby realizing one of my greatest fears. We pulled over and waited and he was able to find us. Even if he hadn't, it would have probably worked out satisfactorily, since everybody was told the city and name of our hotel for that evening.

City riding brings out the best and worst in a bike's transmission. The Yamaha, for example, always grinds its way into first, and all its shifts (ac-



This map shows the route we took to Daytona and return. The route was the same both ways, except for deviations on the return trip indicated by the dotted lines shown on the map.

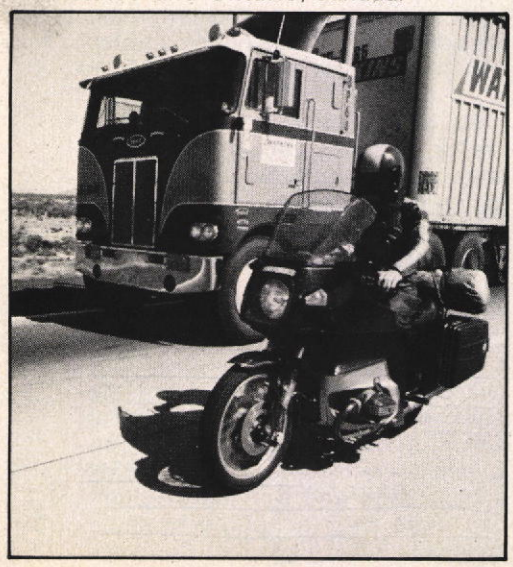


companied by a clunk) must be made forcefully. The Honda missed shifts surprisingly frequently, sometimes popping out of gear right after a shift. The Suzuki was occasionally reluctant to go into fifth gear. Both Kawasaki's shifted well, although it was hard to find the 1000's neutral Position while rolling. However when stopped, a lock-out prevents you from upshifting past neutral from first, so finding neutral when the bike isn't rolling is a cinch. The BMW shifted the most easily and quietly, which indicates that the company's new shift linkage performs as advertised. The Beemer's heel-and-toe shifter will also permit you to upshift without scuffing your boot toe, if that matters to you.

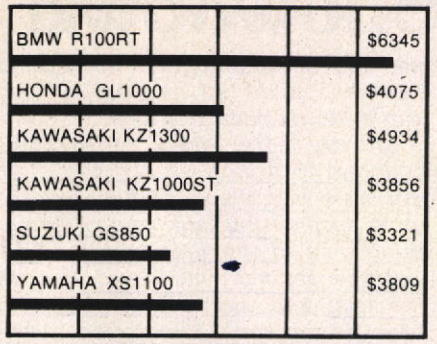
All the Japanese bikes' clutches are progressive and light, with the 1300's getting especially high marks. The BMW's clutch engages abruptly and because the engine has so much flywheel, it is sometimes hard not to lurch away from a stop.

From the Road Captain's log: *We had an easy, short day with a beautiful sunset riding from Hammond, Louisiana to Marianna, Florida. The next day we rode south then east on tiny back roads where farmers were burning their fields and kids waved to us from porches.*

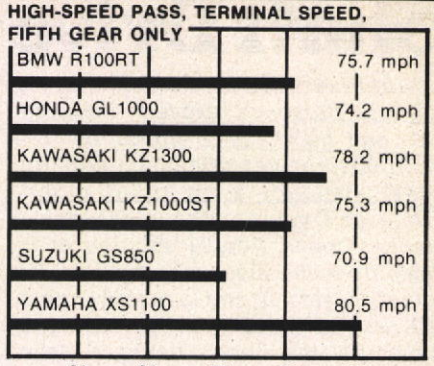
It's easy to tell you're getting near Daytona Beach because motorcycles get thicker every mile. Before today our encounters with other bikes have been rare, a couple of Gold Wings in one place, a BMW in another. In El Paso we'd met a rider on a chopped Yamaha 650 rat, his clothes so tattered that we wondered how he kept from freezing to death. ("Aw, the wind only bothers me through this hole," he told us, showing a fist-sized hole in his shoe.) His rear tire was so bald he'd obviously never make it to Daytona, his destination. Now we ran into riders from a dozen states and Ontario, Canada.



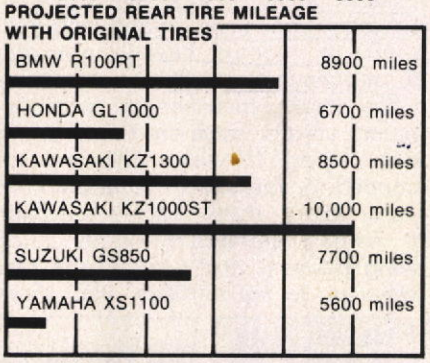
PRICE AS TESTED



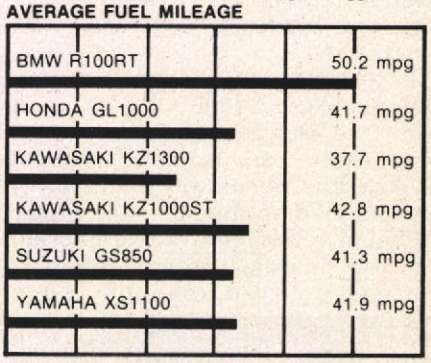
HIGH-SPEED PASS, TERMINAL SPEED, FIFTH GEAR ONLY


BMW R100RT 75.7 mph
HONDA GL1000 74.2 mph
KAWASAKI KZ1300 78.2 mph
KAWASAKI KZ1000ST 75.3 mph
SUZUKI GS850 70.9 mph
YAMAHA XS1100 80.5 mph
60 65 70 75 80

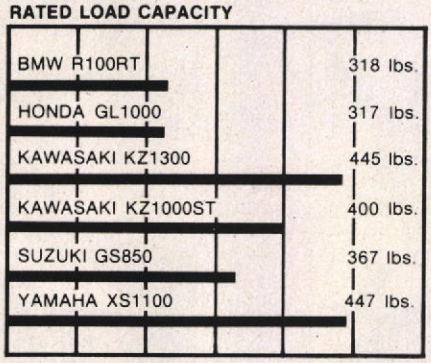
PROJECTED REAR TIRE MILEAGE WITH ORIGINAL TIRES


BMW R100RT 8900 miles
HONDA GL1000 6700 miles
KAWASAKI KZ1300 8500 miles
KAWASAKI KZ1000ST 10,000 miles
SUZUKI GS850 7700 miles
YAMAHA XS1100 5600 miles
6000 7000 8000 9000 10000

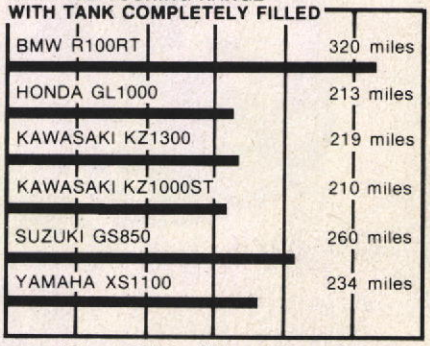
AVERAGE FUEL MILEAGE


BMW R100RT 50.2 mpg
HONDA GL1000 41.7 mpg
KAWASAKI KZ1300 37.7 mpg
KAWASAKI KZ1000ST 42.8 mpg
SUZUKI GS850 41.3 mpg
YAMAHA XS1100 41.9 mpg
30 35 40 45 50

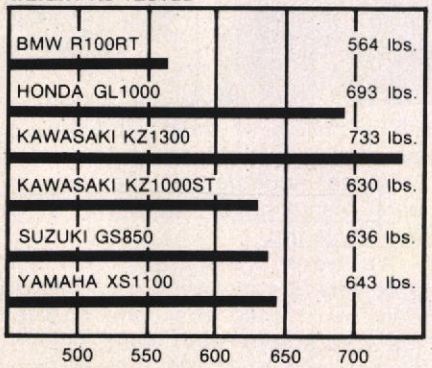
RATED LOAD CAPACITY


BMW R100RT 318 lbs.
HONDA GL1000 317 lbs.
KAWASAKI KZ1300 445 lbs.
KAWASAKI KZ1000ST 400 lbs.
SUZUKI GS850 367 lbs.
YAMAHA XS1100 447 lbs.
250 300 350 400 450

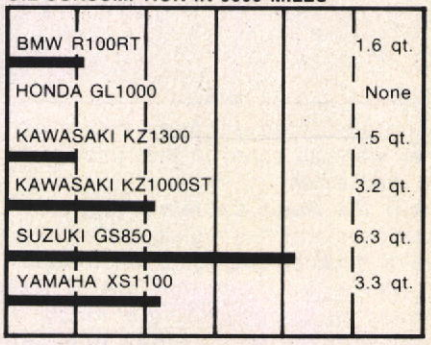
AVERAGE TOURING RANGE WITH TANK COMPLETELY FILLED


BMW R100RT 320 miles
HONDA GL1000 213 miles
KAWASAKI KZ1300 219 miles
KAWASAKI KZ1000ST 210 miles
SUZUKI GS850 260 miles
YAMAHA XS1100 234 miles
100 150 200 250 300

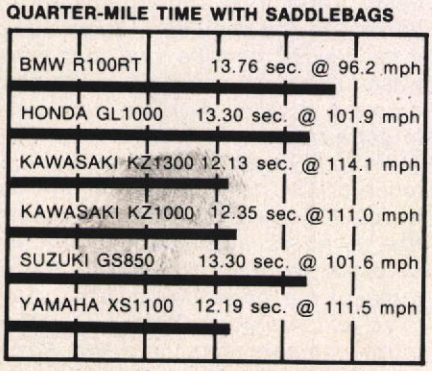
WEIGHT AS TESTED


BMW R100RT 564 lbs.
HONDA GL1000 693 lbs.
KAWASAKI KZ1300 733 lbs.
KAWASAKI KZ1000ST 630 lbs.
SUZUKI GS850 636 lbs.
YAMAHA XS1100 643 lbs.
500 550 600 650 700

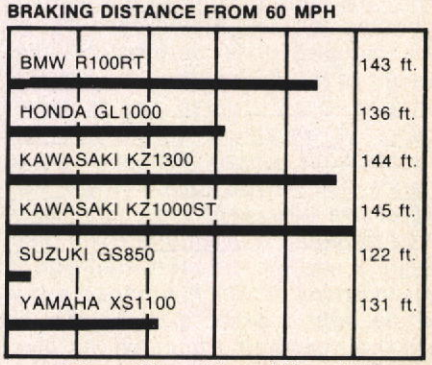
OIL CONSUMPTION IN 5000 MILES


BMW R100RT 1.6 qt.
HONDA GL1000 None
KAWASAKI KZ1300 1.5 qt.
KAWASAKI KZ1000ST 3.2 qt.
SUZUKI GS850 6.3 qt.
YAMAHA XS1100 3.3 qt.
1.5 3.0 4.5 6.0 7.5

QUARTER-MILE TIME WITH SADDLEBAGS


BMW R100RT 13.76 sec. @ 96.2 mph
HONDA GL1000 13.30 sec. @ 101.9 mph
KAWASAKI KZ1300 12.13 sec. @ 114.1 mph
KAWASAKI KZ1000 12.35 sec. @ 111.0 mph
SUZUKI GS850 13.30 sec. @ 101.6 mph
YAMAHA XS1100 12.19 sec. @ 111.5 mph
9 10 12 13 14

BRAKING DISTANCE FROM 60 MPH


BMW R100RT 143 ft.
HONDA GL1000 136 ft.
KAWASAKI KZ1300 144 ft.
KAWASAKI KZ1000ST 145 ft.
SUZUKI GS850 122 ft.
YAMAHA XS1100 131 ft.
125 130 135 140 145

Shaft Drive Showdown

Wherever there are bikers the KZ1300 provoked excited conversation and hundreds of questions. The KZ1000, not yet released, and the BMW also got a lot of attention. Once in Daytona, the 1300 was a traffic-stopper. People shouted at its rider from the sidewalk, ran into the street to stop it and generally reacted. In the meantime, our tourers, especially the ones who have never been to Daytona before were eyeballing the hordes of customs with amazement.

In the intense Speedweek traffic, the Suzuki, KZ1000, XS1100 and even the Big Six performed well. They didn't load up, balk, overheat or stall. The Honda was a little balky and ragged in bumper-to-bumper slogging. The BMW overheated, smoked heavily, detonated loudly, sometimes stalled, ran roughly and generally acted unhappy. However, they were all better in that thick traffic than a car.

From the Road Captain's log: *After four days and five nights in Daytona, we're back on the road, westbound. It was a bad day for the BMW. Parked on its centerstand at lunch, it sunk into the soft asphalt and fell over, snapping off one of the fairing-mounted mirrors. Either because of the sagging fork springs or the weight of the fairing, the bike sits too upright to be trusted on its sidestand, so we almost always use the centerstand which has a narrow stance—too narrow for complete stability. The bike went over again as I tried to mount it at an afternoon bike swap. It was on the centerstand on a paved shoulder which dropped away to the right, making it impossible to use the sidestand. I bumped the bike slightly as I threw my leg over it. It began to fall to the right, and I, standing on one foot to the left of the bike, could do nothing but fall with it. No damage this time.*

Shortly after dark, the 1300 coughed to a stop as if out of fuel. But there was plenty of fuel, leading us to suspect the tank vent or something else in the fuel system. This was the second time it did this on the trip, and our last KZ1300 test bike did the same thing once. Since it starts up again in a few seconds, we didn't worry too much about it, although it could have dangerous consequences in traffic.

The BMW, which has the radar detector, always stays in front, and I was riding it when the others stopped for the 1300, I rode back on the shoulder of the road to get back to them. There was a muddy patch along the way, and I buried the rear wheel up to the mufflers. With three of us pulling, it wasn't too hard to get the bike out, and in the meantime the mudhole was the most secure "centerstand" the BMW had on the whole trip.

We weren't the only ones with problems. We also stopped to help a Kawasaki KZ400 rider who had lost his chain and later that evening came upon a XS750 Special rider parked on the shoulder. When asked if he needed help he said that there wasn't much we could do, since he'd dropped a valve. A friend had gone to get a truck.

We rode to Mobile, Alabama, a distance of 534 miles. During dinner we watched some policemen checking the numbers and licenses on the bikes in front of the hotel. Since three of the bikes don't have plates (just temporary registration, kept in glove compartments) and the Suzuki's plate had expired three months before (we noticed that two days after leaving L.A.), it was fun to watch. Nothing ever came of it, but we were pleased that the bikes were being checked. Maybe next time they'll catch a bike thief.

It speaks well for the state of the art that we didn't have a single major mechanical problem. We had several minor irritations, many of them with the BMW. The R100RT, in addition to its stand problems, broken mirror and detonation, also vibrated loose its seat latch, leaked gas all over its left carburetor, lost a couple of little rubber covers on is windshield adjustment latch and burned out one of its taillight bulbs. The single-filament taillight bulb was different from our spare, so we fixed it by borrowing one from the Suzuki. This prompted one rider to comment. "For what you pay for that BMW, you should get a spare Suzuki." One day after we'd returned to L.A., the BMW's gas cap refused to unlock. This would have been a disaster on the road.

The KZ1000 also burned out a taillight bulb, but its second bulb kept the bike visible from behind. The Honda lost one of the chrome covers in its handlebar end. The only other problem was the self-curing mystery ailment which caused the KZ1300 to stop running on two occasions.

We monitored oil consumption for the trip and had some interesting results. The Suzuki, which used 6.3 quarts in 5000 miles, consumed the most. This was the same 850 we tested in February, and we noticed some smoking then. It was returned to Suzuki after that test with a note that there might be an oil problem. Suzuki said there wasn't. We don't think our consumption figure is normal however. The XS1100 (3.3 quarts) and KZ1000 (3.2 quarts) also consumed some oil. The 1300 and BMW used a little and the Honda didn't use more than a couple of tablespoons in 5000 miles.

The Suzuki had an oil leak around the bevel gear case, where enough oil leaked to make a mess. The BMW, which is supposed to have improved O-ring type seals at its cylinder bases, leaked at both of them and thoroughly stained every rider's right boot. This leak probably accounted for most of the Beemer's oil consumption.

By fitting calibrated VDO oil temperature gauges, we were able to monitor and compare the bikes' oil temperature. Predictably, the two liquid-cooled bikes' oil temperatures always were much cooler than the air-cooled machines'. Even when the water temperature needles soared, the oil temperature, a better indicator of engine condition, was a nice and safe 185 degrees F on the Honda and big Kawasaki. The KZ1000, GS850 and XS1100 showed pretty similar oil temperatures when running hard. They all topped out at 245. The BMW ran the hottest, reaching 250 degrees on the open road and soaring to a dangerous 280 degrees in the handlebar-to-handlebar traffic on Daytona's boulevards.

All the bikes except the Suzuki and BMW wore out their shocks. The Honda's were the first to go, and we noticed their absence by the third day of the trip.

We had to synchronize the BMW's carbs once in Daytona Beach, which helped it run a little smoother, although they were out of sync again by the end of the trip, with a resulting increase in vibration.

The Beemer is the only one of these bikes likely to require much carb synchronizing, since it is the only one with cables for each carb. Three of the bikes—the BMW, Honda and Suzuki—still have breaker point ignitions which are cheaper to fit and

Off The Record...

I think we've done our best to conduct a thorough and fair evaluation of these bikes. We've pointed out each one's obvious shortcomings as well as its advantages, but I'm sure we'll still receive a truckload of mail citing the final standings as total hogwash, and we as complete morons. People will have legitimate opinions, because the true fact of the matter still remains: Touring riders are just as diversified in their tastes as anyone else, and one man's chariot might well be another's steamroller. For example the Suzuki, being the smallest in size with the best overall handling characteristics, will undoubtedly appeal more to the sports tourer who likes traveling light, fast and cheaply, with his toothbrush as his only steady companion. On the other hand, I don't think the Suzuki would fit the needs of an elderly mom and pop duo setting out for a coast-to-coast scenic cruise—they'd probably find more happiness meandering down the road aboard a Gold Wing enjoying the AM/FM tunes, the CB's chatter, the TV's quiz shows, the two-way intercom . . . In reality, each bike does indeed possess its own distinct personality, one that will likewise appeal to a certain type of individual. What we've done is laid the basic foundation; now what you've got to do is accurately analyze the type of touring you do and make the appropriate selection—see how easy it is to get off the hook? *—Rich Cox*

I'll have to admit that my favorite of the six machines was the Suzuki. Relatively light, possessing the most comfortable seat and general riding position and the best suspension overall, the GS850 is a touring rider's delight. Excellent handling was aided in no small way by the air-assisted front forks and rear shocks that are adjustable for spring preload and damping stiffness. The steering geometry was very nearly correct for any condition—the GS850 tracked straight as an arrow yet could be flung around corners until the undercarriage dragged with complete confidence.

A couple of minor annoyances spoiled things somewhat, one of them being an uncharacteristic use of oil and what seemed like a slight lack of passing power after riding rocketships like the KZ1300 and XS Eleven. Being the lowest priced of the six machines will undoubtedly increase its appeal in these days of inflation and an unfavorable dollar/yen relationship. If only it had the power of the XS Eleven! *—Jody Nicholas*

Swing a leg over the Eleven or the Thirteen Hundred and pull out on to the Interstate. Find yourself a fast truck to follow and get ready to go very far in very little time. Both engines are spinning about 5000 rpm—right in the meaty part of their torque curves, so rolling on the gas harder results in a sobering lunge forward that gets stronger and stronger as the speed picks up. The power seems limitless.

Continuous high-speed cruising is what these two bikes are designed for. And for this use, none of the other machines in our comparison even come close. There's just one problem; if you really make use of these bikes, you'll end up in the slammer in short order. Until they turn our Interstates into autobahns, you'll have to do your high-speed touring in the closet. It's a shame that what the Eleven and Thirteen do best, happens to be against the law.*—Jeff Karr*

Several factors became clear as we swapped and rode our six bikes. Riding them fast revealed faults in their seating positions and footpeg and control layouts. All the bars were poorly designed, all the footpegs were too far forward, and all the throttle return springs were too strong. Riding them hard also revealed flaws, as they all wiggled and wobbled because of excess weight in the saddlebags or frame inadequacies or suspension problems or, in some cases, because of the drive shaft. They were really built for cruising at moderate speeds.

For me the bikes gradually fell into one of two categories, those I would own, and those I would not. Ridden conservatively, the Gold Wing is smooth and stable, but uncomfortable. The BMW is an expensive exercise in sticking with tradition. And the KZ1300 is a tremendous thrill between six and eight grand, but in top gear that nets twice the legal speed and maybe a trip to jail.

The XS Eleven is also speedy, but in a more useful, easily controlled way. Just as flexible, well balanced and even better handling are the KZ1000 and Suzuki, though they lack the punch of Yamaha's extraordinary 1100 engine. Of these three, the Suzuki's superb suspension, comfortable seat, pleasant and well-knit character make it my first choice for the next cross-country trip . . . or even for the short ride home. *—Maurice Brouha*

If I had to choose among these six machines, I'd probably take the GS850 if I anticipated lots of snaky mountain roads and no passenger or luggage. If most of my roads were long and straight, if money didn't matter, if gas grew on trees, if all the cops were in the next county and if I lived in a city with a first-class Kawasaki dealer, I'd go for the Big Six because I like its sound and feel.

But since there's more to life, even for a tourer, than shaft-drive motorcycles, I'd buy a Suzuki GS1000E and get better fuel mileage, increased performance, superior handling, lower price, better ride qualities and longer tire life. A little chain maintenance and wiping off the rear wheel occasionally are small prices to pay for all those extra advantages—and I wouldn't even have to deal with those disadvantages if enclosed chains weren't so unfashionable. Heavy, expensive, complicated drive shafts are a second-best solution in my book.

—Art Friedman

I used to laugh at GL1000 owners who, laden with a thousand bucks worth of touring accessories, would fall behind my R90S on Highway One as the miles themselves. Now, after 6000 miles across the plains of America on Highway 10, I have learned to respect their point of view. Motorcycles and straight roads do not have to mix in California, but they do in Texas. If I had to ride across Texas it would be behind a fairing with a radio, tape deck and radar detector. I might even have a gimbled holder for my Pepsi. Better yet, I think I would buy a car.

Of all the bikes on the trip to Daytona, the Suzuki most nearly fills my requirements for touring. It is smooth, stable and very relaxing to spend time on. With some firming-up, the suspension would be excellent for twisty roads. Add a set of Krauser bags, Continentals, oil cooler and some tools and I would be ready to ride it anywhere—as long as the road wasn't straight.*—Joe Minton*

Shaft Drive Showdown

replace (and possibly easier to carry a spare for) but which require more maintenance.

By the end of the trip, the Honda was fouling plugs until warmed up and all the bikes were running a bit ratty at high rpm.

The Yamaha has the longest recommended intervals between maintenance—6450 miles. BMW recommends 5000 miles, and Suzuki suggests service every 3500 miles until 11,000 miles, then every 4000 miles. Honda's manual recommends checking ignition timing, cleaning the air cleaner and draining the crank breather overflow tank every 3750 miles with major services half that often. Kawasaki recommends full services every 3000 miles.

From the Road Captain's log: *After visiting the battleship Alabama, we went through the tunnel under Mobile Bay, backfiring as we went until it sounded like a war.*

Dark clouds loomed over us all day, but it never rained. The KZ1000 ran out of gas after 171 miles—this time in heavy Lake Charles, Louisiana traffic.

The touring range referred to on the accompanying charts is calculated by multiplying the measured capacity of the fuel tank (when its brimming with every drop it will hold) by the average fuel mileage. The range will be substantially shorter on bikes like the GS850 and KZ1000 unless you take time squeezing in the last few ounces of fuel with short gulps from the gas pump hose. The Honda, on the other hand, is easy to fill to its maximum capacity, even though it sometimes overflows (which is taken care of by a convenient drain). Some bikes with more theoretical range than the Honda ran out of gas first.

Anyway you cut it, the KZ1000 had the least range, even though it got the second best mileage (42.8 mpg average). With the biggest tank and the best average mileage (50.2 mpg, over 7 mpg better than the KZ1000), the BMW had the most range by far. The Suzuki didn't get particularly good mileage (41.3 mpg), but its tank was big enough to go a long way—if you took the time to top it off. The Honda and Yamaha also got mileage in the 41 mpg bracket. The big 1300 paid for its weight with a thirsty 37.7 mpg. It was still a prototype with prototype carbs, so this (along with the warm-up characteristics and throttle response) may change. We reckoned that it was running a little rich.

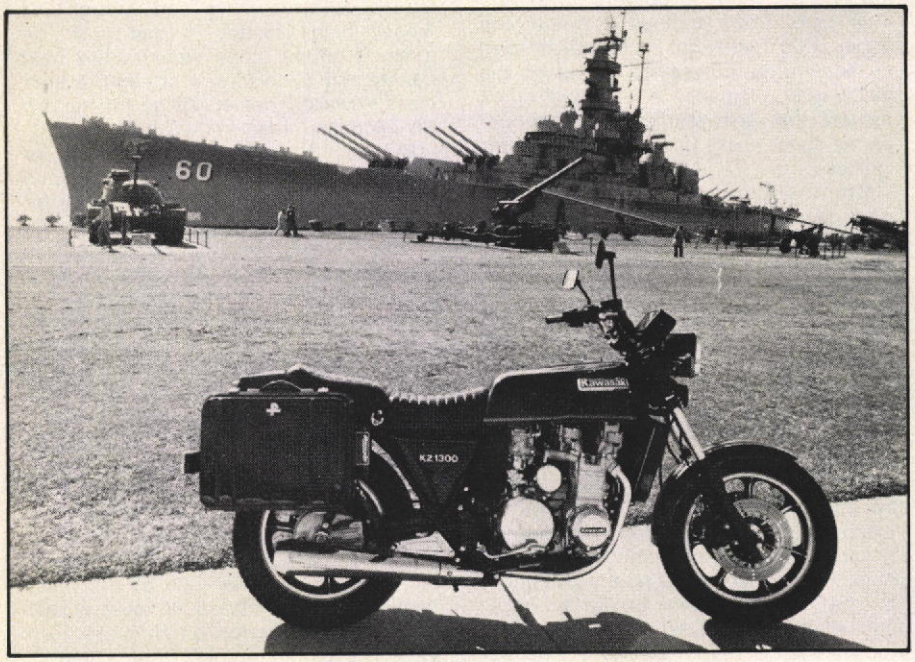
To calculate mileage, we had to check odometers and tripmeters, which varied by 2 percent. The BMW, KZ1000 and Suzuki were the most accurate. However the BMW's speedometer was ridiculously optimistic. To do an actual 60 mph, you had to be showing 68 mph. If you were a law-abiding citizen, always riding an indicated 55 mph, you'd lose an hour for every eight hours you rode if you believed the BMW speedo.

From the Road Captain's log: *Those clouds stayed with us all day of the third day of the westbound leg. We crawled across Texas from Columbus to Van Horn. We needed a couple of bolts for one of the saddlebags and stopped in San Antonio at a first-class Kawasaki shop where we got to bench-racing and talking about the KZs. We also loosened up the KZ1000's steering head just a tad, which made it steer more responsively. In the process we lost over an hour out of our 600-mile schedule and ended up riding at night in the rain. At least the rain will help save the tires.*

Rear tire mileage was of real concern to us. We knew the BMW tires would go the distance and presumed the Suzuki's would too. Weight and power are the enemies of tires. Honda warned us that the GL1000's tires might not make it "if you plan on riding over the legal limit." That turned out to be a little pessimistic. We did stray over the legal limit upon occasion (the GL1000 will show 110 with saddlebags) and there was a little tread left. Kawasaki also predicted that the 1300's rear tire might be close. As it turned out, the 1300 had quite a bit left. The only tire that looked tired at trip's end was the Yamaha's which had almost 6000 miles on it when we returned.

We carefully measured tread depth before and after the trip and the accompanying graph shows the calculated (or actual in the case of the Yamaha) tire life. The Dunlops on the two Kawasaki's are very impressive tires. Besides a demonstrated longevity, they're the only tubeless tires here, (which you'll appreciate the next time you pick up a nail) and stick pretty well. In fact, these tires worked better in the corners than the tires on the KZ1000 Mk. II sports bike. The Suzuki's tires were the only other ones with notably good grip in the corners.

In addition to all those good things, the KZ tires will tolerate a fairly heavy load. Tires are a major factor considered when setting the Gross Vehicle Weight Rating



(GVWR), the maximum rated total weight of the bike including rider, passenger, luggage and fuel). One of our graphs shows load capacity (figured by substracting the bike's weight with a full tank of fuel and saddlebags from the GVWR). If you have a fat girlfriend you'll have to jettison her if you ride the Honda or BMW and wish to observe the GVWR.

From the Road Captain's log: *Like horses heading for the barn, we cut a trail through New Mexico, heading for Phoenix. Motoring along at a good clip, we topped a hill and discovered that the pavement ended just ahead. It makes you appreciate the Suzuki's brakes. After a short stint on dirt roads we got into some twisty canyon roads, which we gave a thorough scratching until dusk when we motored out of the Superstition Mountains and into Phoenix.*

There was one delay when Joe had a discussion with a State Highway Patrolman. The patrolman said he reckoned Joe was going between 80 and 90, and Joe allowed as how that was probably conservative. Turned out that the guy was a biker himself and he let Joe go. The only reason the rest of us didn't get involved in the conversation as that we were well out in front and he didn't see us.

All of the bikes in the test have two front disc brakes and a single rear disc, but there is a world of difference in the way they stop—at least the 20-foot difference between what it takes to stop the GS850 from 60 mph and what it takes to stop the BMW and Kawasakis from the same speed will seem like the world if a truck is occupying it. In our panic-stop braking tests, which were conducted with saddlebags, the Suzuki dramatically outperformed the other machines. The two Kawasakis did the worst, with the BMW also turning in an unimpressive performance from 60 mph. The accompanying graphs tell the story. The 1300's front brake surged slightly and so does the BMW's rear brake.

From the Road Captain's log: *Jeff was sick this morning, apparently from food poisoning. It made the last leg of the ride less than pleasurable for him.*

The Amco saddlebags on the Suzuki started popping open. The rider on the bike was unaware of it, and both times it happened, he'd just continue down the Interstate with gloves, riding suits, jeans and underwear flying out in his wake. The riders behind him would screech to a stop and scurry around, picking up socks and undershorts. Jeff would pull off his helmet and throw up. Then we'd continue.

It was late evening when we arrived in Los Angeles, 16 long days after departing. Rain sprinkled lightly as we worked through the Sunset Strip traffic to Motorcyclist's *office and stormed down the driveway, backfiring and honking.*

Dale ran out to greet us. "You did it!" he shouted, patting our backs. Then smiling, he asked, "If I said you could turn around and head for Maine right now, how many of you would go?"

"I would," I told him.

"Me too," chimed in a couple more voices.

Turning to me, he said, "That's good because you leave in a week for a ten-day tour of the Southwest."

"I'm ready," I told him. M

Winners And Losers

WINNERS

SUZUKI GS850: Although short on power when compared to some of the other bikes in this group and not particularly strong in fuel mileage, the GS850 is the most comfortable by a significant margin, the best handler, the best stopper, has the best drive train and costs the least. A winner for any street rider, it is the foremost choice for tourers who appreciate fine handling and don't pack double with lots of luggage and a house trailer. With three votes for best overall plus a vote tying it with the Yamaha, the little bike of the bunch was our choice for best overall.

YAMAHA XS1100: That smooth, immensely powerful, bulletproof engine plus terrific suspension compliance and high all-around comfort almost gave the Yamaha the win outright. Two of the testers picked the 1100 as the best overall and one called it a tie with the Suzuki. The Yamaha is better for the rider who values power and torque more than crisp handling. If you're thinking about a full-dress tourer packing heavy loads, the XS1100 is your winner. It's also the second least expensive of the six. Its drawbacks are handling, drive-train lash and tire life.

IN THE HUNT

KAWASAKI KZ1000ST: Our testers cited comfort, especially vibration, and cost as their reasons for excluding the ST from their top two choices. The KZ1000 received third and fourth-place rankings exclusively. We liked its strong, proven engine, its steady chassis performance and versatile nature. Riders who have ridden both KZ1000 models preferred the ST to the chain-drive version.

KAWASAKI KZ1300: The big six received the most wide-ranging overall ratings in the test. It's the kind of bike you either love or hate. We agreed that the smooth, flexible engine and impressive stability were its strong points, but complaints included poor mileage, drive-line slop, riding position, weight, lack of cornering clearance and the stiff price. It will make an impressive full-dress tourer.

LOSERS

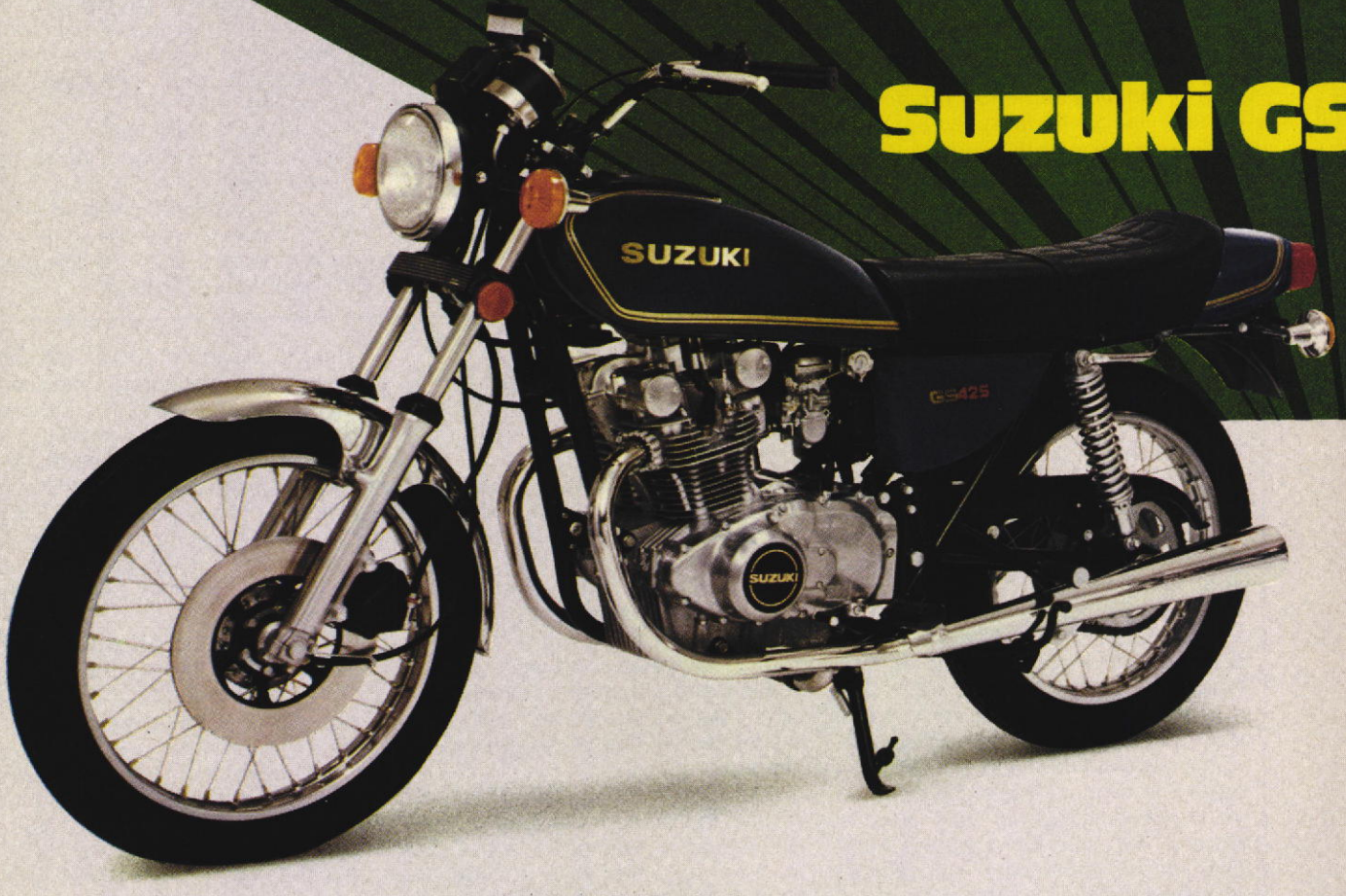
BMW R100RT: At the heart of the BMW there is, if not a winner, then a strong contender. Light weight, good mid-range power, reasonable handling and excellent fuel mileage indicate lots of potential. But every time we got on the bike, there was another annoyance. A seat worse than past BMW seats. Thoughtless stands. Sagging forks. Vibration. Hopelessly inaccurate instruments. Excessive rise and dive. Mediocre brakes. Oil leaks. A missing seat latch. Not-quite-right handlebars. A grabby clutch. Detonation. A distortion-filled windshield. Bings in the shins. Surging rear brake. Poor suspension compliance on little bumps. Stiff throttle. Leaky carbs. A stuck gas cap.

A clock and a great toolkit don't make up for those irritations, and nothing makes up for a hard seat when you've been sitting on it for eight hours. And you have to pay $2000 more than the Suzuki just to get the T model, the unfaired model which the RT is based on. You can buy *two* Suzukis for the price of the R100RT. BMW has had 56 years to refine the flat twin, but somehow they still haven't done it, at least not with this machine.

HONDA GL1000 GOLD WING: That smooth, reliable engine is the most appealing aspect of the 'Wing, but it's also the key to many of its problems. The engine is heavy and wide, so stiff suspension is necessary to provide a safe amount of cornering clearance. There goes ride comfort. Too much weight and poor handling were common complaints. So was the poor throttle response and peaky powerband. The Honda is more expensive than the XS1100 and does virtually nothing as well.

Win a Pair of

Suzuki GS



Win Both: GS-1000 and 425. How'd you like to win a streetbike for yourself and your favorite person? Well, here's your chance. You could win two great Suzuki streetbikes for the price of none.

Ten Pairs for Ten Winners. All ten winners will win a matched set: A mighty GS-1000 with front air forks, 4-stroke DOHC engine and disc brakes all around. Plus a nimble GS-425 with a 4-stroke twin engine, electric starter and digital gear indicator. So enter now and win two of a great kind!

Entry Forms at participating Suzuki Dealers. To enter the free drawing, just

Performers

Streetbikes.

drop by your participating Suzuki Dealer for an entry form and full details.

There's nothing to buy. But you must have a valid driver's license to enter. Sweepstakes ends June 29, 1979. So visit your Suzuki Dealer right away. Good luck to you. And your favorite person.

FREE Suzuki Team Cap for everybody who enters. See your Suzuki Dealer for details.

Residents of Ohio **only** may receive an entry form and details by submitting a self-addressed stamped envelope to: Suzuki "Pair of Performers" Sweepstakes, P.O. Box 8537, Blair, Ne. 68004. Request must be received by June 8, 1979. Sweepstakes void in Utah and the Maryland county of Howard and where prohibited by law.

Suzuki. The performer.

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Best Performance in an On/Off-Road Series. The 1979 Honda XLs.

Sound like we're handing you a line? We are. The best and biggest line of dual-purpose motorcycles going. The Honda XLs.

Street sweet. Dirt worthy. Good-time transportation alternatives. Six bikes designed to do the work of twelve.

Super Tech Starts Here.

When you talk about the broad capabilities and fun of Honda's XLs, you're also talking about advanced motorcycle technology. Honda Total Concept Engineering. Each component system-designed to harmonize on a specific bike.

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A tech check on the three biggest XLs tells the story. Diamond frames that use the engine as a chassis member for increased rigidity. Hot-sparking, maintenance-free CD ignition. Automatic compression releases. Long-travel suspension with leading-axle forks. And inverted, lay-down, gas-charged rear shocks.

Special Honda-designed dual-purpose tires give you claw action in dirt, smooth ride on pavement. And Honda gives you an unequalled reputation for four-stroke reliability and economy.

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It's here at last. Traditional big single virtues, like massive torque and broad powerband. Easier to kick over, thanks to the automatic compression release. The big-bore, short-stroke, four-valves-per-cylinder design makes it a free breather. And dual engine vibration counterbalancers make it a pleasure to ride.

The XL500S is a street bike of exceptional character. And it's a dirt bike that can do it all, from afternoons at the cycle park to bike-camping excursions into the high piney woods or the wilds of lower Baja.

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For the rider who wants all the XL500S advanced technology features in a mid-sized package, the XL250S has no equal. It's the machine that rewrote state-of-the-art

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HONDA
GOING STRONG!

Daytona 79 Payday For The Pig Farmer

By Jeff Karr

"It's The Checkered Flag That Counts"
David Aldana

This year was a completely different story. In years past, the Daytona 200 has been the scene of some tremendous riding, but not necessarily very exciting *racing*. Two-hundred miles is a long way to go, and after an hour or so, the bikes are usually so strung out that the guy in second can't even *see* the guy in first, let alone catch him. That's the way it was last year, and the year before, and . . .

But not this year. For 180 miles, Dale Singleton and Dave Aldana fought for the lead within a few bike lengths of each other. They put in two spectacular displays of WFO riding. But not any more spectacular than what was taking place back in the pack. Riders were doing impossible things on underpowered bikes, while others were making amazing saves in spite of slippery hard-compound tires. This year there were several riders who had a good shot at winning and more than one that really deserved to win. But in the end, there's only one first place.

The main factor contributing to the wide-open racing at Daytona this year was a unique set of circumstances. Unlike years past, there were no "sure things"—no certainties. Last year's winner and 500cc World Champion Kenny Roberts was still out of action due to injuries sustained in a crash while testing in Japan. Last year, he lapped the entire field, so he would have been a virtual shoo-in this time around if his machinery held together. Kenny's absence gave a lot of riders a hope of winning, including Californian Skip Aksland, who was chosen to ride in Roberts' place on Roberts' bike. This was to be Aksland's first ride on a factory Yamaha, which would theoretically give him a valuable horsepower advantage. If a favorite had to be picked, Skip was the one.

But as demonstrated in qualifying, the privateers hadn't given up yet. Singleton, Romero, VanDulman and Aldana all qualified within 2 mph and 2 seconds of each other.

A major equalizing factor was the tire situation. There were no Dunlops or Michelins available, just one compound of Goodyear slicks. The hard compound would go the distance, but not without a lot of slipping and sliding. Referred to as "woodies" by some competitors, the tires were alleged to be the cause of numerous crashes and near crashes.

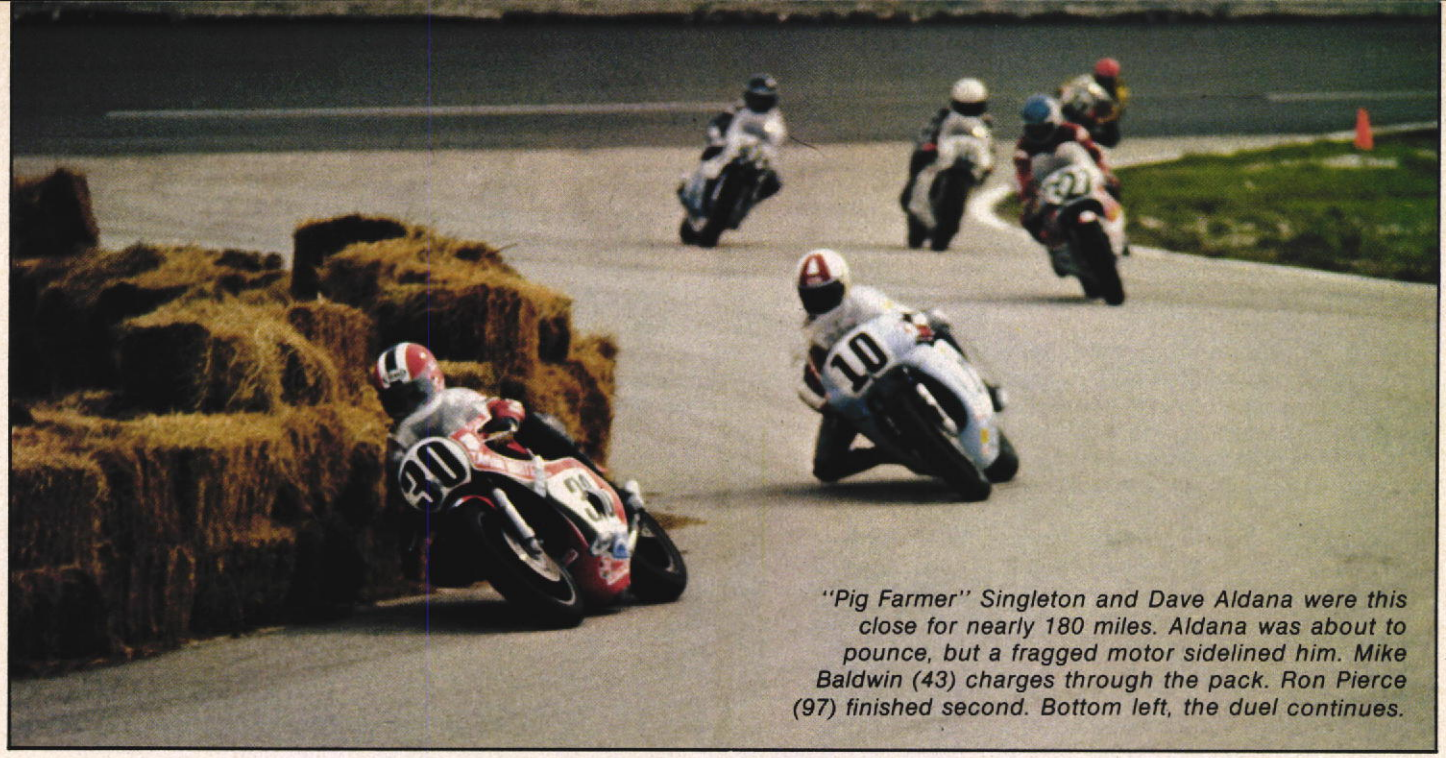
Though there was less variety than usual in rubber, there was more variety in machinery. More liberal rules allowed machines that previously were illegal at Daytona. There was an unusually large helping of 350s, as well as the first U.S. appearance of the Suzuki 500cc square four and the re-appearance of Team Kawasaki. Team Green was capably represented by 1978 750cc champion Mike Baldwin on a KR750. The not-too-quick two-stroke triple was down on horsepower compared to the Yamahas, particularly when equipped with AMA-mandated carburetor restrictors. Baldwin said the torquey triple was quick through the infield, but about 15 mph slower than the fastest Yamahas up on the banking. There's no way of telling how close Baldwin's speed estimate was, because just before Thursday's qualifying session, Mike crashed heavily in turn four, injuring his left shoulder and wrist. Later, Baldwin was vague in his description of the injuries and there was some speculation as to whether he would start the 200-miler, even if there was room for him at the back of the grid. His shoulder *did* keep him out of Friday's 100-mile Superbike Production race.

Two Suzuki RG500s were entered, one piloted by Englishman Mick Grant and another by countryman Dennis Ireland. The Suzukis were an unknown quantity until the initial results of Thursday's qualifying were released. A lot of Yamaha riders swallowed hard when the two bikes were listed as the two fastest qualifiers, with Grant breaking Roberts' lap record. Much to the relief of many, a re-check unearthed an error in the calculations, putting the Suzukis in 16th and 56th.

But this wasn't the only confusion surrounding qualifying. A new GP format requires a rider to complete at least five timed laps during a timed practice session. In the past, only one timed lap was required. This new system left some riders in a blind rage when they were informed after qualifying was closed that they hadn't completed five full laps. In several instances these riders claimed that they *had* done all five. One such rider was John Long, who ended up gridded clear back in 69th place. Needless to say, he was somewhat displeased with the new system. Still other riders completed their five laps, but through confusion as to the timing procedure, backed off too early on their last lap and were credited with slow times.

Aksland, too, had troubles with the clock during Thursday's qualifying session. For him, it became a real challenge making it around the 3.87-mile circuit just once, let alone five times at speed. Almost immediately after heading out for qualifying on his No. 1 bike, a slower rider fell in front of him and while attempting to avoid the downed machine, he fell also. You might think that throwing away a mega-buck factory YZR750 would leave a guy a little rattled, but not Skip. Team Yamaha wheeled out the No. 2 bike and before Aksland's freshly wadded-up machine was even brought back to the pits by the crash truck, he was back out on the track. This time he collected second fastest qualifying time instead of bruises and scrapes. And not a moment too soon. He completed lap five just as qualifying closed.

Dale Singleton gave us an idea of what was to come, by posting the fastest qualifying time—a 2:06.339, which works out to an average speed of 110.275 mph. Not bad for a guy who spends most of his off-time slopping hogs. It seems that Singleton has received a lot of flack about his dealing with pigs back in Dalton, Georgia. Singleton turned his harassment into a calling card by bringing all manner of pig paraphernalia with him to Florida. The Taylor White Construction Racing Team was decked out in pig shirts, and Singleton's leathers were emblazoned with his patented pig logo. A little porker named Elmer was on hand to serve as mascot and was said to be a dead ringer for Taylor White. In fact, it's rumored that Team Swine made sties out of their hotel rooms and dined out of troughs, however we can't



"Pig Farmer" Singleton and Dave Aldana were this close for nearly 180 miles. Aldana was about to pounce, but a fragged motor sidelined him. Mike Baldwin (43) charges through the pack. Ron Pierce (97) finished second. Bottom left, the duel continues.

PHOTOGRAPHY: ART FRIEDMAN, RICH COX, JEFF KARR

Daytona 79

vouch for the authenticity of these rumors.

Gene Romero managed to post third fastest qualifying time, this after just two practice laps. Romero's father died late Monday, and Gene flew home for the funeral, returning to Daytona late Thursday afternoon for qualifying.

Race day itself was just as unpredictable as qualifying. Rainy weather got things off to a late start, then the skies cleared. While the track dried, a rider's meeting came up with a revised schedule. Practice was cut in half—down to just 30 minutes, and instead of three hours between the end of practice and the start of the race, there was to be just half an hour of maintenance time before the start. The shortened pre-race schedule made for a lot of action in a very short while.

Practice got the green flag and within five minutes pit row was dotted with disabled machines, the most notable of which was Skip Aksland's factory Yamaha. It seized a cylinder after just two laps. Out came the wrenches and on went a new cylinder, but not in time for Skip to get in any more track time before the race.

Down at the other end of pit row Team Green was having a few problems also. Baldwin was fit enough to ride and had signed on for last place on the starting grid clear at the back of the third wave. But after a few laps of practice his Green Meanie blew a head gasket. Out came the wrenches and on went a new head gasket.

Another wrenching session was taking place in Roberto Pietri's pits. A blown gearbox TKOed his Yamaha race motor, so he bought a used TZ on the spot and began stuffing its motor in his chassis. His crew was still struggling with pipes and carbs as the bikes were called out to the grid. Minutes later, as the National Anthem started, No. 88 was rolled out onto the grid to the cheers of a crowd of impressed onlookers. Regrettably, only a few laps into the race, the machine seized terminally.

The three starting waves were flagged off at ten second intervals. Singleton took advantage of his pole position and grabbed the lead followed closely by Aksland, Aldana, VanDulmen, Pons and Pierce. These six swapped positions frantically on lap one, but Singleton was back out front as they came by for the first time. Aksland dropped down off the banking early for turn one as his ride ended for the day with another identical seizure, probably ignition induced.

Up front the leaders continued swapping positions, led by Singleton and Aldana. Behind them even more incredible racing was taking place. Mike Baldwin, who had started 20 seconds down on the leaders, had already weaved his way through better than 60 riders by lap five, and was working on the top ten. Following Baldwin on his charge through the pack was John Long, who had also been gridded in the third wave. Before the race the two were joking about their race strategy. It was suggested that Baldwin could punch a hole through the infield traffic, with Long tucked in behind, then up on the banking, Long's faster Yamaha could pull out front and tow the Kawasaki along faster than it could run on its own power alone. Though neither rider actually went through with this scheme, the results were much the same. The two charged their way through traffic like grain through a goose. Baldwin didn't have the horsepower to make up time on the banking, so he had to do it all in the infield. Unofficial clocks showed him as much as 2.5 seconds quicker through the infield than any other rider. It was said that Baldwin was drafting 350s on the straights to gain more speed.

Meanwhile, Singleton and Aldana were dueling for the lead, though the Pig Farmer usually had an edge at the start/finish line. Randy Mamola had come from a second-row start on his Jim Doyle Yamaha to take first place lap money on lap ten, but fragged his motor and was out within two more laps. That left VanDulman, Pons and Ron Pierce in the top five when the pit stops started.

After the gas stop, Aldana and Singleton were still dicing, though with less gusto, and had opened up a bit of a lead on Pons and Pierce. Baldwin took over a distant fifth place when VanDulman dropped out with carb problems. Singleton was racing by the seat of his pants much of the way due to a foul-up with his pit signals. He couldn't make much sense out of his pit board, so he watched other rider's boards to get some idea of what was going on. Gene Romero was out of the race early with a broken connecting rod and was now

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Dale Singleton, only the second privateer to win the Daytona 200, samples the fruits of victory while his porky guest mascot Elmer squeals his approval.

Mike Baldwin's Daytona

Just A Crash Away From The Triple Crown... By Tiff Ford

In roadracing last year one name hoisted itself from the obscurity of the also rans, "back markers" as Barry Sheene calls them, and thrust itself firmly into the consciousness of race followers on both sides of the Atlantic.

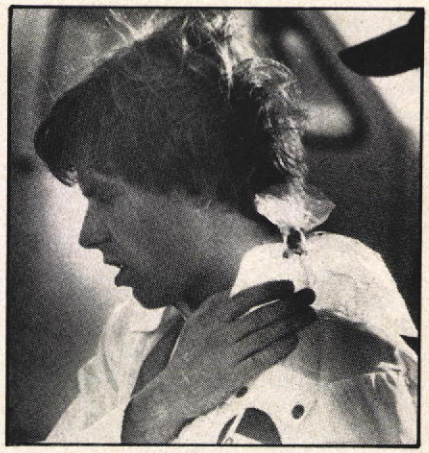
The name? Mike Baldwin. He, even more so than winner Dale Singleton or favorite Skip Aksland, was the week's protagonist at Daytona this year. After all, who else had the equipment and ability to win each major class: Superbike Production, 250 Lightweight and Formula 750—the Triple Crown of Speedweek?

Though he had won two AMA Nationals during 1978, his role as an international contender didn't begin until last September at Laguna Seca where he faced a world caliber grid of factory riders on factory machines. Riding a self-sponsored and self-tuned production Yamaha TZ750, a bike acknowledged to be at least a year behind Roberts' and Baker's factory racers in development, a heavier, slower motorcycle by all accounts, Baldwin stuck himself to the tail of the two flying factory racers and simply refused to be left behind. To keep up on the slower machine he had to ride excruciatingly hard, so hard that he pulled in after finishing with bleeding toes and knees from cornering at impossible angles.

A week later at the final Formula 750 GP at Mosport, Canada, he struck again. Still on his homespun TZ, bought at a Yamaha dealer like each of a hundred others, he walked away from Kenny Roberts without so much as a backward glance. The number of people who can pull a lead like that on Kenny Roberts can be counted on the fingers of one hand. It is a very special man indeed who has looked over his shoulder and seen KR receding into the distance. Michael beat Kenny by 40 seconds that day, and legend has it that when asked to comment on Baldwin's performance after the race, Roberts, in a few words that spoke volumes, said, "Forty seconds, what can I say? Forty seconds."

After these performances, and a European trip to compete on the U.S. team at the World Cup match races at Imola, where he won the adulation of the European fans and the European motoring press by racing, with an unfamiliar motor, against Roberts and Barry Sheene on equal terms, Kawasaki scooped him up and signed him for their American based factory team.

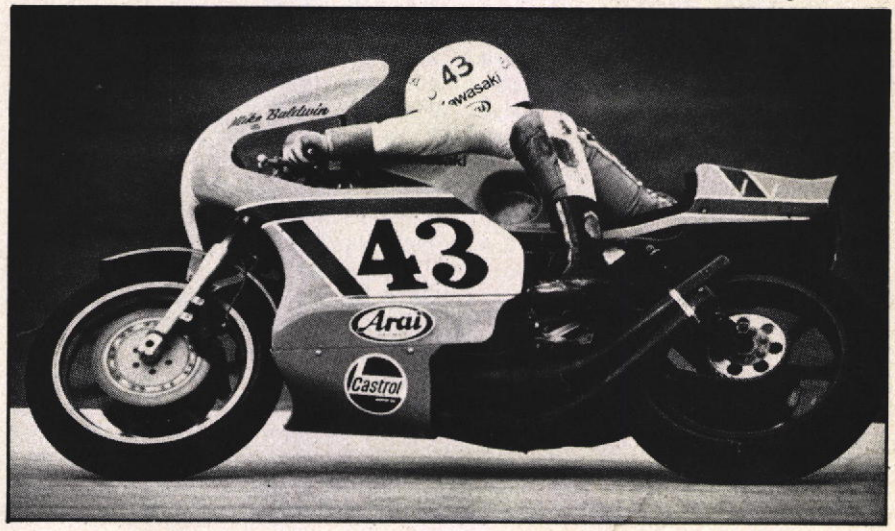
Daytona was Michael's first race for Kawasaki—his first view from the luxury of a private garage, his first major race in which somebody other than himself or a friend would be responsible for the tuning of his bikes. And, it would be the first time Michael would not be seen as a man who was plainly going to make it, rather someone who had now paid his dues, made his first bold strokes—and was, if not at the very top of his profession, at the tender age of twenty-four , a man very certainly in the process of arriving.



Here is the agony of defeat. Mike's practice crash spoiled his first Daytona for Kawasaki and a chance to prove that he is America's most versatile roadracer. In good health he may have been able to ride his slower Kawasaki hard enough to win.

Wednesday, March 7

What the Kawasaki roadracing effort may lack in the way of technological advancement, it more than makes up for with sheer style. The greens' garage is stuck right in the first wave of pit row, chartreuse banners everywhere, the concrete in front neatly cordoned off from the Instamatic-armed masses. The race bikes not being worked on in the garage are resting polished, groomed and cleaned on the fenced in apron for the passing gawkers to enjoy.



Between practice sessions of the three classes he will ride, Baldwin stays in the comparative shade of the garage, wearing his new green-and-white leathers as if he'd been riding for Kawasaki for years. He carries an air of serene seriousness with him when he is working, and right now his work is setting up the bikes for the long and brutally fast Daytona course. He'll come in off the track and be able, instantly, to diagnose jetting problems, suspension settings, even fine points of the weight distribution of body over the motorcycle.

With strangers, fans, and stray members of the press Baldwin often responds with genuine warmth—but, like many racers, and most of the really good ones, he is reserved, even aloof. From a well-off family living in Darien, Connecticut, he would fit in easily at Harvard or Yale with his scrubbed and earnestly boyish face. One gets the feeling that he rarely has a moment when he's not thinking about the job at hand, when he's not analyzing the track conditions, or his motorcycle, or his competition. Speaking to him, it's easy to get the impression that

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PHOTOGRAPHY TIFF FORD

Daytona 79 Suzuki Sweeps The Superbikes

Pops Yoshimura Fields A Team Of Supermen

By Rich Cox

Superbike racing, AMA's fastest growing form of competition, finally came of age at Daytona this year. Over 80 entries crowded endless rows of pit stalls and you could literally sense the heated excitement and enthusiasm these lethal four-stroke monsters were creating. They're no longer the wild, uncontrollable beasts of earlier years, but have finally gained respect and support from spectators and racers alike. Some speculate that they'll be the featured machines of the 1980 running of the Daytona 200—if so, it's a move that will likely return the spirit of brand competitiveness to American roadracing.

A liberalization of the rules governing these machines is partially responsible for elevating superbikes into the limelight. Last year engine builders were allowed to use four-into-one accessory exhaust systems and this year a rule change permitted the usage of any make carburetor up to 31mm in size (they were formerly restricted to using stock-bodied carbs). These changes have not only heightened competition among those tuning and riding the big fours, but also encouraged the backing from big-buck accessory sponsors too—for they now had a viable reason to become involved.

Brute horsepower and blazing speed have always been superbike trademarks, but this year the AMA added a third dimension by lengthening the Bell Helmet Superbike Production race to 100 miles. Each rider was required to make a mandatory pit stop whether he needed gas or not. So it wouldn't be just speed that won this Daytona, but endurance and pit efficiency too.

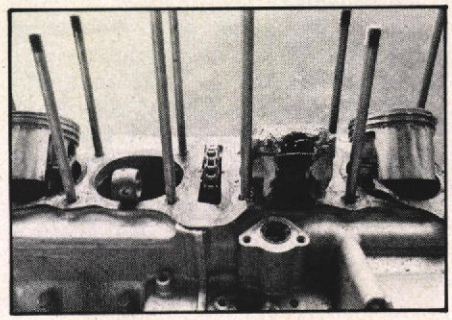
As Friday's 100-miler crept closer, the crowds started bunching around the Yoshimura, Racecrafters and Vetter camps, the pre-race favorites. Each were fielding immaculately prepared team efforts. Three seasoned superbike riders—Wes Cooley, Ron Pierce and Dave Emde—were straddling a trio of Yoshimura GS1000 Suzukis, bikes that were typically worn and battered looking, but so incredibly fast, so brutally powerful, it was unbelievable. The highly modified endurance engines were near replicas to the one which gave Pops Yoshimura a victory at last year's Suzuka eight-hour endurance race in Japan—only here they were spinning the engines much harder, shifting them at an ear-piercing 10,500 rpm instead of 9,000.

Pops had the competition shaking in their boots during Thursday's heat races when both Ron and Wes motored away from the pack in their individual heats. Posting blistering lap averages of 101 and 104 mph respectively, they left second place contenders over 30 seconds behind in both cases. As the Suzukis rocketed down the straights, shaking the oval from the high-pitched wine of their 145+ horsepower engines, the opposition stood impatiently at the fences mumbling, "They'll never last. They can't last, will they?" It looked like they could. Pierce had bent a mess of exhaust valves a day earlier when he missed a shift in practice, but other than that the Suzukis appeared as bulletproof as Fort Knox. Pops would just sit back in his lawn chair inside the Yoshimura pits and smile contentedly as his cast of crew members methodically went through each bike with a fine comb.

The exotic bright-red and yellow Racecrafters' Kawasakis, piloted by defending Daytona winner Steve McLaughlin and Harry Klinzmann, were formidable contenders when it came to horsepower and handling, but both bikes had been plagued with carburetion and ignition problems since entering the Daytona city limits. The coughing and sputtering continued into the heat races, giving both riders mid-pack finishes and fourth row starting positions for Friday's race. It was rumored that McLaughlin, who was by now losing his patience with the bikes, was out with his tuner, Harry Maillet, doing WFO speed-runs on a lonely stretch of highway at 5 a.m. Friday morning searching desperately for the problem—a problem that was ultimately traced back to ignition condensers that weren't grounding properly.

The Vetter Kawasakis of defending superbike champion Reg Pridmore and teammate Keith Code could have rivaled the Yoshimura Suzukis in the heat races if not for a mysterious engine bug that kept disintegrating No. 3 pistons. Chief tuner Pierre des Roches had spent hours running the

Pops, with wife and trophy, at airport in Daytona. He smiled all the way home to his shop in Los Angeles.



Here's the engine Reg Pridmore lunched in practice. Engine failures such as this kept Team Vetter mechanics thoroughly frustrated throughout the week.

Superbike Results

1.	Ron Pierce, Bakersfield, CA	Suz
2.	Wes Cooley, Mission Viejo, CA	Suz
3.	David Emde, Ramona, CA	Suz
4.	John Long, Miami, FL	BMW
5.	Harry Klinzmann, Garden Grove, CA	Kaw
6.	John Bettencourt, West Milford, NJ	Suz
7.	Kerry Bryant, Placerville, CA	Kaw
8.	Jon Minonno, Dallas, TX	BMW
9.	William Weston, DDO, Canada	Duc
10.	Carl Smith, Miami, FL	Suz

PHOTOGRAPHY: ART FRIEDMAN, RICH COX, JODY NICHOLAS, DOZIER MOBLEY

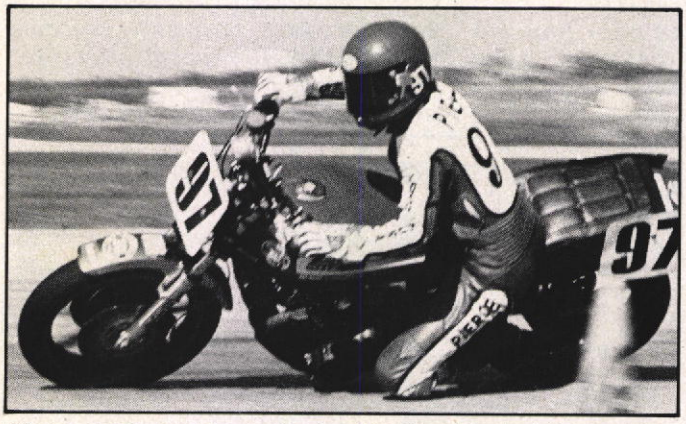
engines on C.R. Axtell's dyno in California, shaping, carving and tailoring the engine so that it would produce reliable horsepower—and lots of it. Equipped with Mikuni smooth-bore carbs, the engines could supposedly pump out an enormous 140 horsepower at only 9000 rpm, for days on end. But strange things happen at Daytona—usually not good. Reggie's engine self-destructed in practice, was replaced, and then annihilated itself again in his five-lap heat race. Keith's bike showed similar symptoms but hung together to finish the heat. The last time we saw Pierre, he had thrown up his hands in disgust and was walking toward the Kawasaki factory's garage sniffing for spare parts. The next day Reggie's bike wasn't near as fast as it once was.

The big disappointment—at least among Kawasaki fans—was the loss of Kawasaki's ace factory rider, Mike Baldwin. Despite riding an underpowered machine (allegedly Cooley's old Yoshimura Kawasaki that Pops sold back to the factory), Mike proved in Wednesday's practice session that he could actually equal the lap times of Pierce and Cooley. Many felt he was the fastest rider on the course, but it was all for nothing because Thursday he crashed while practicing on his 750 GP bike, suffering a severely bruised left shoulder and wrist. He bowed out of the superbike race rather regretfully, knowing he was Kawasaki's best shot at upsetting the Suzukis.

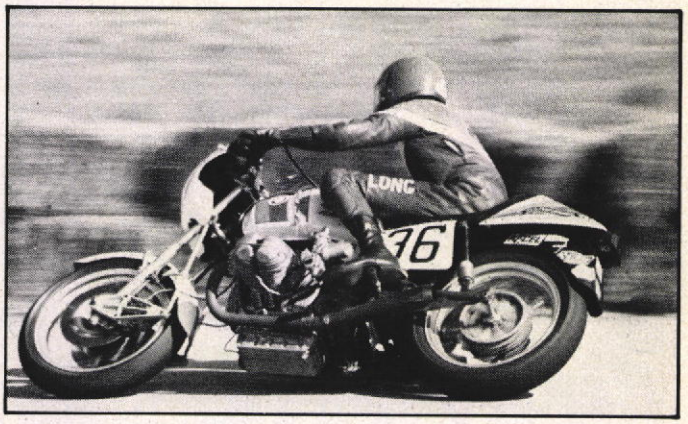
As the 63 riders gridded for the 26-lap superbike final, all eyes focused on Cooley and Pierce: Would they run away and hide, or break trying? As the flag dropped, Cooley and Pierce wasted no time getting the jump on the pack as they screamed through the infield. Chasing them down the back straight was Venezuelan Roberto Pietri aboard an Arrow Suzuki, McLaughlin, 17-year old Freddie Spencer riding a fast Berliner Ducati, John Long aboard a G.S. Performance BMW (he finished second to Pridmore last year in AMA standings) and the Ducati of Richard Schlachter. Pridmore, who had been sandwiched mid-pack was already in trouble: He tried to squeeze through the chicane on the back stretch, bounced off a haybale and careened across the track, knocking the front wheel out from under Carry Keoshgerian's Suzuki. Carry hit the turf hard, Reg wobbled off the track and continued on—an incident which prompted a near fistfight between the two after the race. Meanwhile, McLaughlin had pushed into fourth place but then the gas cap on his Kawasaki flew open in turn one spewing gas every which way. By the time he relatched it and collected his senses, half the pack had gone by.

By lap four Cooley had opened a 7-second lead on Pierce, but few had noticed Emde rushing up through the pack. Emde had crashed his lightweight 250 the day before and was unable to make his heat race. However, he did grid the bike, so the officials allowed him to start Friday's race from dead last on the starting line. Methodically picking off riders one by one, Emde moved ahead of Long's BMW on lap seven to take over fifth position.

The front five remained unchanged until the 13th lap when Cooley stormed into the pits for fuel, with Pierce following ten seconds behind. By now the rest of the pack was trailing by at least 25 seconds. The Yoshimura crew performed a Wood's Brothers pit stop, sending both riders on their way without relinquishing the lead. As Cooley bombed down the long 3000-foot back straight, suddenly, without warning he failed to slow

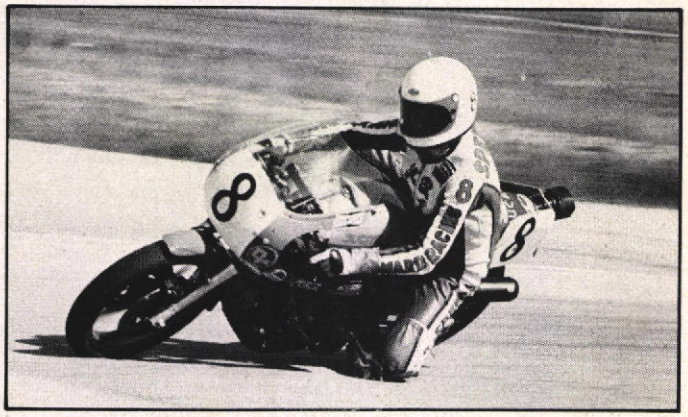


Pierce really had Lady Luck with him: He lost it once in turn four, the handlebars scrapped the ground, but he miraculously bounced back up, waved to the crowd and took off. His lap averages were faster than the 250s.



John Long, who last year finished second to Pridmore in overall points, really hustled to get his no-dive equipped BMW into fourth place. The Beemer went the distance without refueling and actually had a gallon to spare.

It was an impressive sweep for the Yoshimura clan, one Pierce, Cooley and Emde had dreamed about for some time. Pierce took home $2000, the winner's share of the $11,500 purse, and a trophy which he awarded to Pops.



Young Freddie Spencer, who literally rode the wheels off his Howard Racing Suzuki-sponsored Ducati, at one time actually had Cooley and Emde beat for second place, but the big Duck unfortunately expired before the finish.

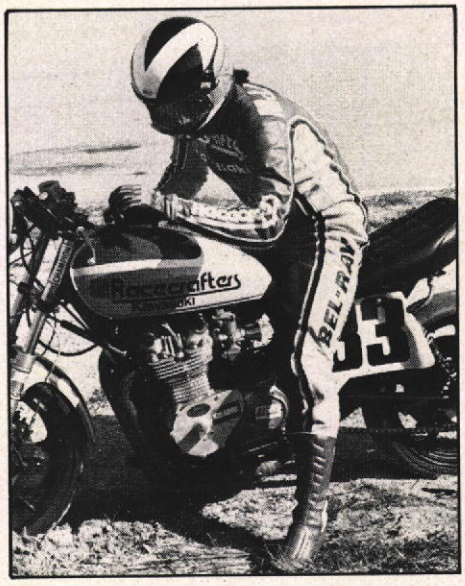
Daytona 79

down for the hard left-hander going into the chicane, running straight off the track for 40 yards. By the time he backtracked, Pierce, Pietri and Spencer had stormed by. Later, Wes explained what happened: "About the eighth lap I started to lose my front brake, and I was using the motor to slow, but soon I ended up without any brakes, so I couldn't hold the lead."

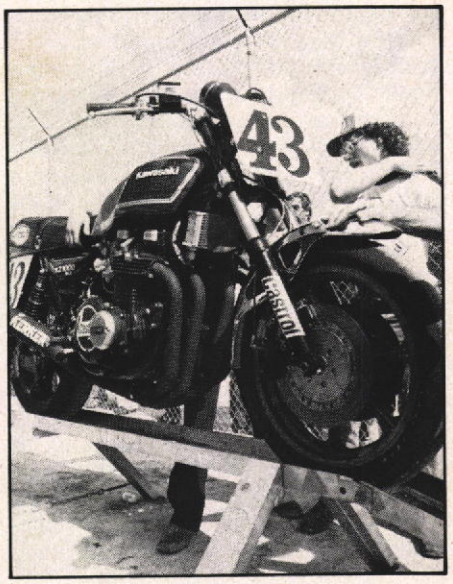
With pit stops going on all over, there was a constant shuffling of positions—nobody really knew who was in for gas or in for repairs. Both Spencer (who could likely be the next Kenny Roberts protege) and Cooley moved a notch closer to Pierce when Pietri pitted his Suzuki on lap 14, moving him back to fourth. Then Spencer pulled his Ducati into the pits on lap 19 for a long 29-second stop which moved him way back to sixth.

By lap 20, Pierce, who was averaging a blistering 102.55 mph around the 3.87-mile course, had a comfortable 20-second lead over Cooley, while Emde, Pietri and Long were doing their best to fight off a heavy challenge from a hard-charging Spencer. But as expected, the late laps took their toll on machinery. Spencer's Ducati finally succumbed to sheared teeth on the countershaft sprocket on the 24th lap. Pietri saw his fourth place finish fly out the window when his Suzuki lost its chain, and Pridmore, who had been in the hunt for fourth place, was also sidelined in the last few laps with a broken chain.

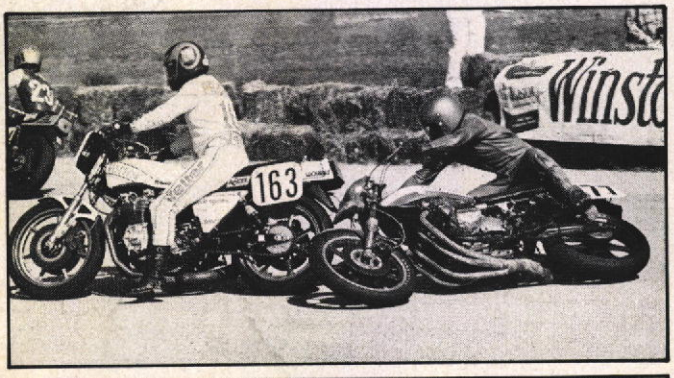
It was an impressive showing for Suzuki and Yoshimura as Pierce took the checkered flag 24 seconds ahead of Cooley and Emde. Pierce's average speed was 103.121 mph, several tenths faster than the 250cc GP bikes. If the AMA designed this Daytona as a test for the years to come, then it was definitely an exciting and impressive prelude to 1980. *M*

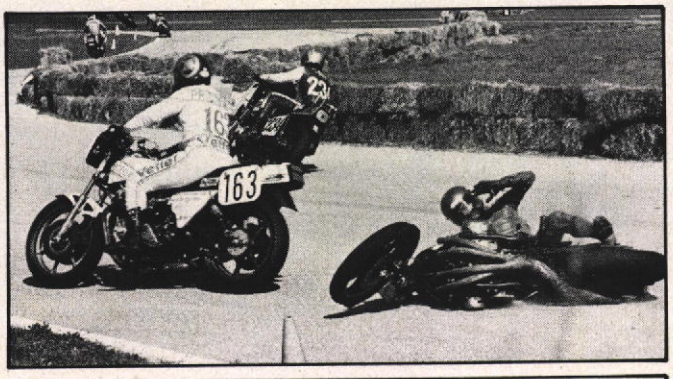


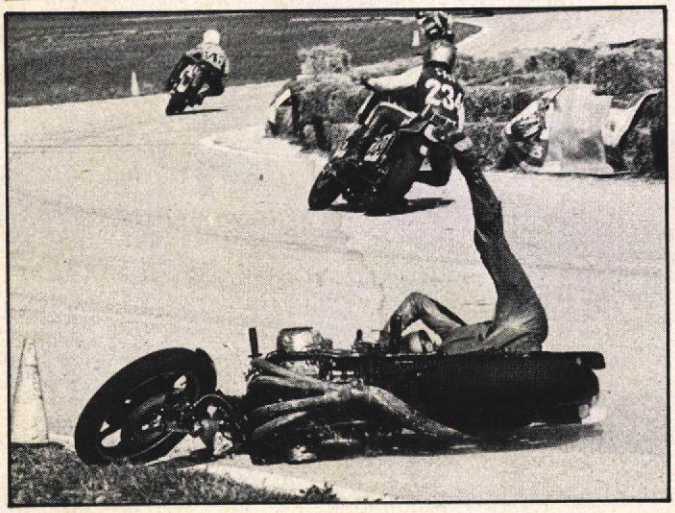
McLaughlin charged back from his first lap bout with the spewing gas cap, only to be struck down again in the later laps with a flat rear slick.

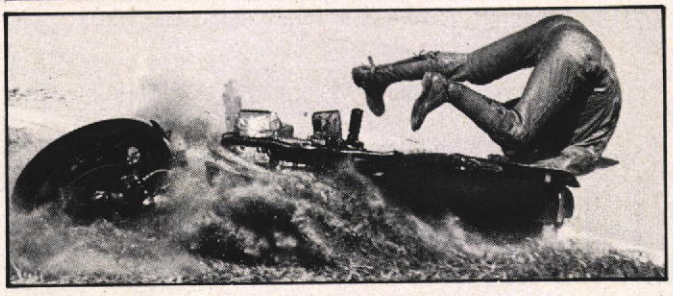


Mike Baldwin's beautifully prepared KZ1000 MK. II. They could have given the Suzukis a run for their money, but they never got the chance.









This is the first lap collision between Reg Pridmore and Carry Keoshgerian that prompted a heated argument after the race. Pridmore had attempted to slide through the back chicane on the inside, got squeezed into a haybale and then richocheted across the track taking out Carry's front wheel. "You knocked me down! You rode like a crazy madman," Carry zeroed in on Pridmore. That's when the press started scattering.

Suzuki lowers the boom on the competition...

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GS

Suzuki's new

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You've seen the so-called "Specials" from the other guys.

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It's more than the lean, low look.

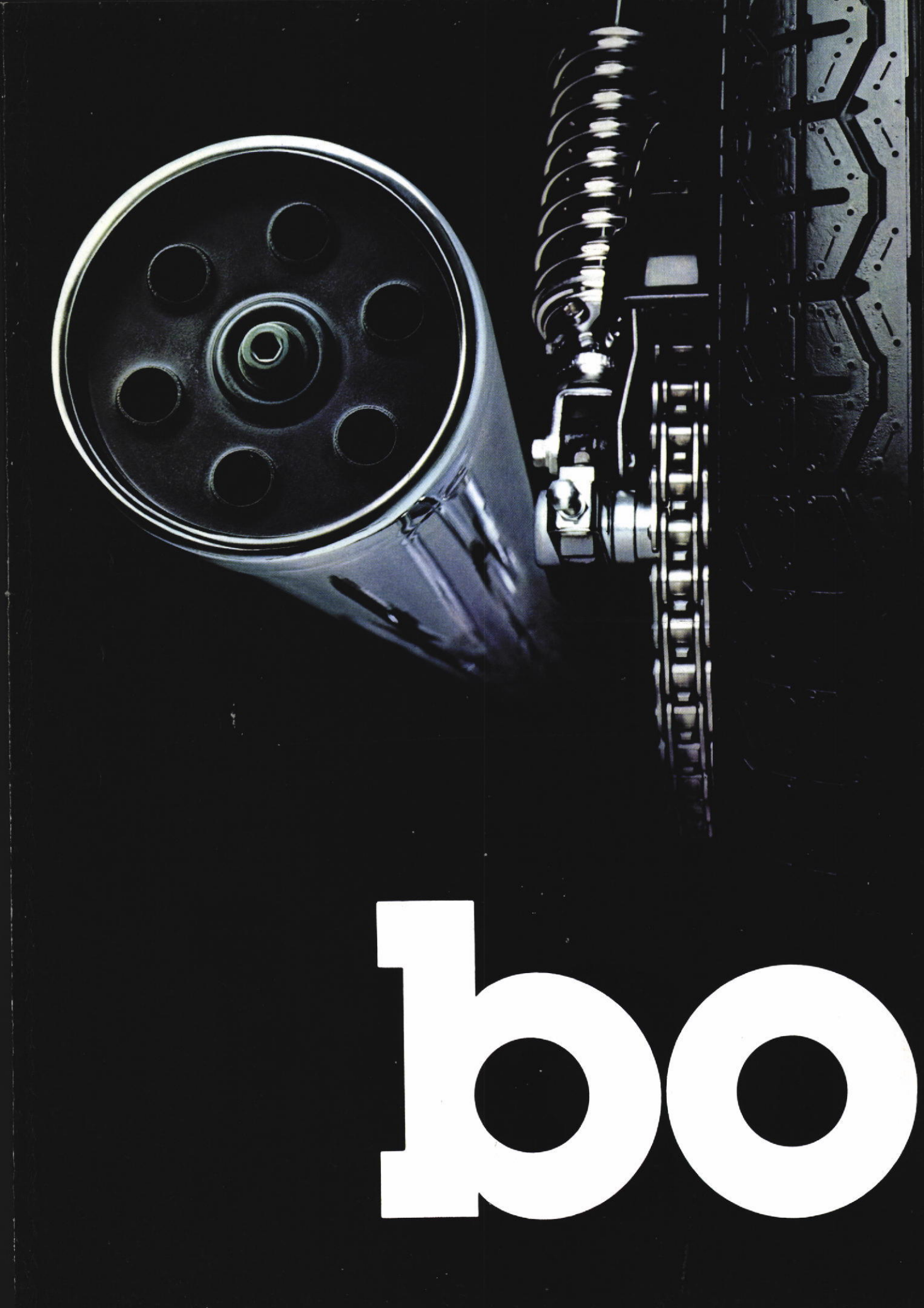
Even more than neat things like extended forks, pull-back handlebars, tear-drop tank, plush step saddle and chopped megaphone pipes.

It's much deeper than that.

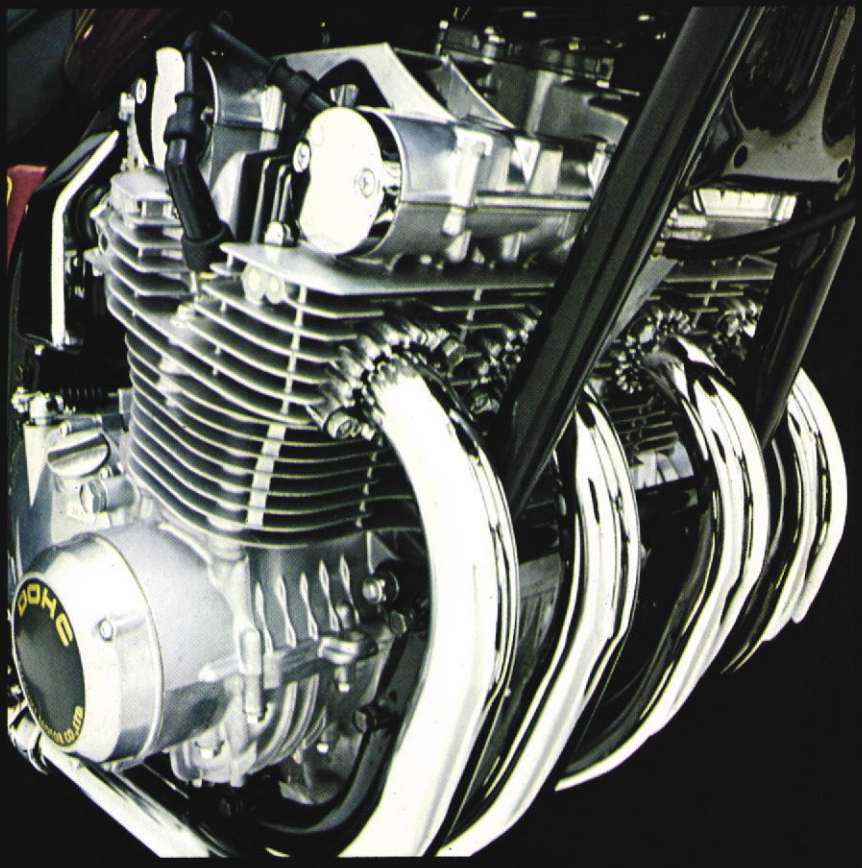
You see, underneath it all, the Low Slingers are GS streetbikes.

And that, friends, is very special.

GS-750L


bo

The Slinger Sting.



Muscular 4-stroke DOHC 4-cylinder engine powers the GS-550L, 750L and 1000L. This mighty mill uses a roller bearing crankshaft for high-RPM performance.

other Stingers

Mag-Type Wheels

Extended Forks

Pull-Back Handlebars

Sleek Tear-Drop Tank

Plush Step Saddle

Chopped Mega-phone Pipes

SPECIFICATIONS	GS-550L	GS-750L	GS-1000L
Displacement	549cc	748cc	997cc
Starter System	Electric & kick	Electric & kick	Electric
Transmission	6 speed, constant mesh	5 speed, constant mesh	5 speed, constant mesh
Suspension: Front Fork	Oil damped	Oil damped	Air, oil damped
Suspension: Rear Swing Arm	Oil damped, 5 load settings	Oil damped, 5 load settings	Oil damped, 5 load settings, 4 damping adjustments
Brakes: Front	Hydraulic caliper disc	Hydraulic caliper double discs	Hydraulic caliper double discs
Brakes: Rear	Hydraulic caliper disc	Hydraulic caliper disc	Hydraulic caliper disc
Tires: Front	3.25-H19	3.25-H19	3.50-V19
Tires: Rear	3.75-H18	4.50-H17	4.50-V19
Fuel Tank Capacity	13 lit (3.4 gal)	13 lit (3.4 gal)	15 lit (4.0 gal)
Seat Height	797mm (31.4 in)	793mm (31.2 in)	825mm (32.5 in)
Dry Weight	208 kg (460 lbs)	233 kg (514 lbs)	240 kg (529 lbs)
Color	Black, Maroon	Blue, Maroon	Blue, Maroon

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GS-550L

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Daytona 79

PAYDAY FOR THE PIG FARMER

continued from page 48

handling Aldana's lap board. Singleton could tell how close Aldana was by noting when Romero lifted the board. Romero and Aldana made up Team Bean this year, and the death of Romero's father earlier in the week affected them both. Aldana said later, "When I saw Gene, I knew it was now up to me to win for Gene and his dad."

And after the last gas stop, that's exactly what he tried to do. Again he and Singleton were wheel to wheel. Aldana seemed to be able to pass almost at will, particularly in the infield. Again and again Dave powered his Paul Dahmen Yamaha around Singleton, obviously preparing for a last lap charge to take the checkered flag. In the meantime he saved his motor by tucking in behind the Georgian on the banking and letting Singleton's engine do the work.

This was going to be good. Either one of these guys could do it, but one thing was for sure: it was going to be very close. Less than twenty miles from the finish, though, it was settled. Aldana's bike rolled to a stop in the infield, its engine reduced to shrapnel. Singleton was all by himself out front. This put Pierce in second more than ten seconds behind the leader. He was followed by Patrick Pons on a Sanauto Gauloises Yamaha. Baldwin continued his drive until the finish, picking up four places in the last seven laps to finish fourth. He was followed by Christian Sarron and John Long; behind them was Mick Grant on one of the Suzuki RG500s.

True, this year's 200-miler didn't go down to the wire. But it featured more tight racing than any 200 in recent memory. The battle for first was an incredible duel, and though Aldana had an edge, it was of little use to him as he watched from the sidelines as Singleton motored by. What little the Pig Farmer lacked in speed, he more than made up for with longevity. Dave Aldana is quick to point out that "it's the checkered flag that counts." Dale Singleton isn't about to argue with that. For his performance, he won $15,000 in prize and lap money. Dale summed it up in the barnyard jargon that has become his trademark, "I slopped all you hogs today!" *M*

Daytona 200 Results

1.	Dale Singleton, Dalton, GA	Yam
2.	Ron Pierce, Bakersfield, CA	Yam
3.	Patrick Pons, Paris, France	Yam
4.	Mike Baldwin, Darien, CT	Kaw
5.	Christian Sarron, Paris, France	Yam
6.	John Long, Miami, FL	Yam
7.	Bruce Patterson, Chardon, OH	Yam
8.	Harry Cone, Sherman, TX	Yam
9.	Mick Grant, W. Yorkshire, England	Suz
10.	Ron Mass, Atlanta, GA	Yam

MIKE BALDWIN'S DAYTONA

continued from page 49

he's not really listening to you as his eyes move over the landscape, his mind never slowing. And then the eyes come to bear on you, and contact is made—but, you never forget, on his terms. On his terms, or not at all. Mike Baldwin acts like a man who could succeed at anything he decided he really wanted to do. He could make it as a stockbroker, or a lawyer or a fighter pilot—if he chose to. Like Roger DeCoster, whom he even resembles physically, Mike Baldwin always gives one the feeling that he's in command of the immediate situation. It's a rare quality in a middle-aged man—and almost unheard of for a youth of twenty- four.

With both Kenny Roberts and Steve Baker on the mend and out of action for Daytona, Baldwin stood an excellent chance to come out of the weekend a hero—if he and his bikes held together. In practice he ran as fast as anyone in all three classes, the 750, the 250 and the Superbike.

His 750 bike is not the best motorcycle for Daytona—far from it. A water-cooled two-stroke transverse three, it is severely down on power compared to the privateer Yamahas, and especially the factory bike of Roberts being ridden in his absence by Skip Aksland. He would have to contend with the likes of Dale Singleton, Rich Schlacter, Dave Aldana, Ron Pierce and Gene

Romero, all on bikes faster than his. Mike estimated that he was giving up ten to 15 mph to the faster Yamahas on the banking—time that could only be made up by superior riding on the trickier and more dangerous parts of the course, and in the tight and twisty sections of the infield. Michael could make up the most lost time in the touchiest places—the entrance to the infield, where the bikes are braking from 170 mph down to the 70 or 80 required for the first turn, and the chicane on the back straight, the place photographers looking for crash shots spend most of their time. Baldwin was up to the task. His 750 laps were consistent 2:08s, the same times Singleton and Aksland were turning.

On Wednesday it looked like Michael had the Superbike race in the bag. He had two beautifully prepared KZ1000 Mk. IIs to choose from, and his lap times were a full second faster than those of his closest competitor, Wes Cooley on a Yoshimura GS1000 Suzuki.

The 250 Expert race would pit Baldwin, on a competitive water-cooled inline twin Kawasaki, against Yamaha-mounted Randy Mamola, Freddie Spencer, Skip Aksland on the factory bike of Roberts and the usual horde of privateer Yamahas. At this point it looked like Michael had a chance of winning all three races at Daytona, a feat which would not soon be forgotten, if he could pull it off.

In his 250 heat on Wednesday Baldwin faced all his major 250 competition except Aksland—and a horrible start, due to a loaded-up cylinder on his very cold-blooded Kaw made the race a thing of beauty. Off the line dead last, he lit out in flying pursuit of the leaders as his engine cleared. He would pass two, three, even four riders in a corner as he reeled in Spencer and Mamola, both of whom were too busy with the other to even think about the madman on the green machine steadily closing the gap. Spencer had dropped back, replaced by Anton Mang, a German rider on a Yamaha, just as Baldwin caught them in the infield on the last lap. Baldwin went by Mang going into turn two and by Mamola coming out of the same turn, but he couldn't make the pass stick because of the strange line he had been forced to take to swoop both leaders in the same corner. Mamola

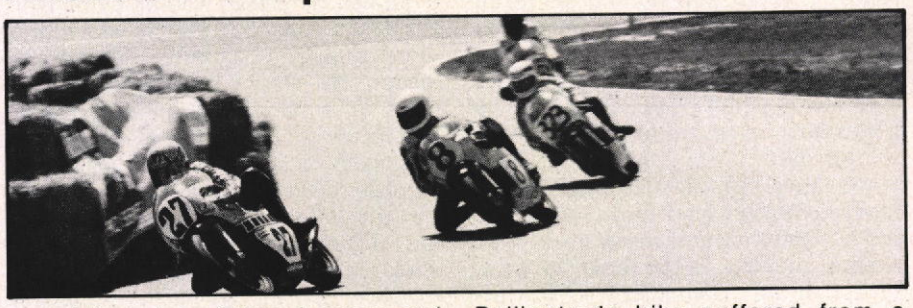
continued on page 96

Daytona 79

250s Play Cat And Mouse

By Jody Nicholas

Aksland And Spencer Duel For 100 Miles



The 250 class has traditionally been one of the most exciting in the AMA professional series over the past several years. The reasons are obvious: Freddie Spencer rode Erv Kanemoto's Yamaha TZ250 through the speed traps at over 151 mph, a speed greater than most of the 1000cc Superbikes, and the race average of 102.119 mph was just slightly slower than that of the big four-strokes on which Ron Pierce thundered home at an average of 103.121 mph.

Most of the entries were Yamahas with Skip Aksland's winning bike being a brand new TZ250F with the now standard "low-boy" chassis. Nobby Clark, of the Kel Carruthers/Yamaha USA team, remarked that the bike was "bog standard," having arrived at Yamaha headquarters in Los Angeles only a week before the team departed for Daytona. Two of the other fast Yamahas were anything but standard with Erv Kanemoto's machine sporting a beautifully designed and crafted frame of Erv's design and an engine that was the fastest in the field. Randy Mamola's Jim Doyle-sponsored TZ was a Yamaha in the engine department but had a superbly crafted (and adjustable) Bimota frame with Brembo brakes and Marzocchi suspension. And the Kawasakis were there with Kork Ballington, last year's 250 and 350cc world champion, leading the assault. The in-line vertical twin two-strokes now have their separate crankshafts geared together so that the pistons rise and fall together, making the bike a "twingle." Three of the five machines in the front row for the final were Kawasakis and many spectators wondered if one of them could pull off the win as Gregg Hansford had done last year.

In the first lightweight heat race Mamola got away in front while Mike Baldwin, Kawasaki's newest ace, stormed through the pack from a last row start. Freddie Spencer took the lead away from Mamola on the second lap but by the next time around had dropped back, a victim of sand in the left carburetor. Baldwin was spectacular, diving into the first turn farther than seemed possible, but was unable to catch Mamola, who was also using his brakes to the maximum. Kork Ballington came home third some distance back and was followed by Eddie Lawson and Rusty Sharp.

The second heat race was only a little less spectacular with Miami's John Long stretching his lead for the first two laps until he slowed enough for West Germany's Anton Mang (Kawasaki) and Skip Aksland to pass him for first and second positions. Both heat race times were fast and not very much different so the final was anticipated to be extra exciting.

Early morning practice on Friday gave the riders a chance to scuff in new tires, triple-check the carburetor jetting and in Skip Aksland's case, seize the engine. Kel Carruthers and crew replaced the cylinder and pistons and Skip had to start with a "fresh" engine so he played it safe for the first four laps, making sure it wouldn't seize again.

Randy Mamola led the first lap on the George Vukmanovich-tuned Bimota/Yamaha with Freddie Spencer close behind and Skip Aksland a distance back in third. The first Kawasaki was Anton Mang's, back in ninth position on the third lap. Mike Baldwin had crashed his 750 bike heavily on Thursday, severely bruising his left shoulder and damaging his left wrist, and many thought it was the pain that made him pull his Kawasaki out only a little over a lap into the race. In actual fact he managed to burn the clutch up while trying to clear out a loaded engine that was fouling the spark plugs. Kork Ballington's bike suffered from a stuck thermostat and subsequent overheating problems on the fourth lap so only one Kawasaki remained.

By the fifth lap it was evident that the 100-mile 26-lap race was going to be a trophy dash with Aksland, Spencer and Mamola running under the proverbial blanket. For the first 12 laps Mamola had the braking advantage, diving into the first turn deeper than the other two, but Skip Aksland had better acceleration between the corners in the infield and Freddie Spencer seemed to have a slight advantage in top speed on the backstretch. In the first 12 laps the lead changed 21 times, but Mamola's front brake began to fail and he lost ground slowly.

Some distance back Anton Mang was keeping his Kawasaki ahead of California AFM star Gennady Liubimski on one of Harry Hunt's beautifully prepared Yamahas, and the pair was slowly reeling in Mamola. Randy's problems were compounded when his machine started leaking oil, making it difficult to keep his foot on the footpeg and change gears.

With Mamola out from under the blanket, Aksland and Spencer diced furiously with the lead changing several times. Aksland was the mouse and Spencer the cat waiting to draft Skip down the front stretch and take the win, but Skip led going into the final lap and stretched out his lead through the turn two horseshoe and was several bike-lengths ahead when they hit the banking. Spencer managed to close the distance slightly before the chicane and looked like he might be able to catch Aksland's draft coming out of the final turn, but his plan was thwarted when he had to shut off somewhat to avoid being sandwiched between two lapped riders and Aksland won by no more than two lengths. M

100-Mile Lightweight Results

1. Skip Aksland, Manteca, CA	Yam
2. Freddie Spencer, Shreveport, LA	Yam
3. Randy Mamola, Santa Clara, CA	Yam
4. Anton Mang, Inning, W. Germany	Kaw
5. Gennady Liubimski, San Francisco, CA	Yam
6. Rusty Sharp, Colo. Springs, CO	Yam
7. Eddie Lawson, Ontario, CA	Yam
8. Tommy Byars, Beaumont, TX	Yam
9. Hal Coleman, Lakeland, FL	Yam
10. Barry Woodland, Northwood, England	Yam

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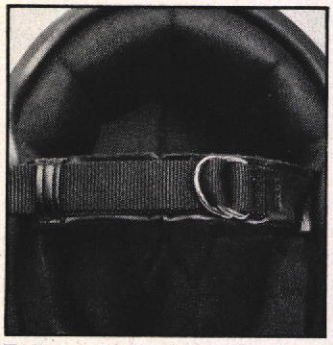

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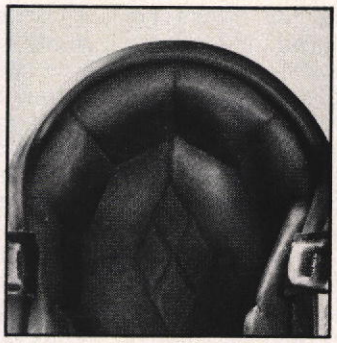

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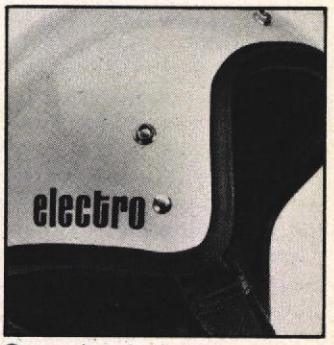

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Daytona 79 My Most Interesting Experience On The Tour

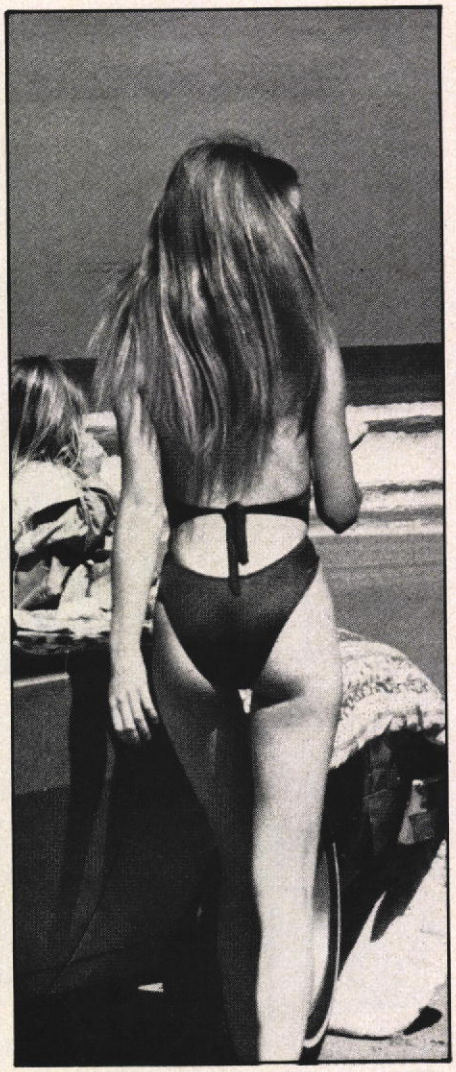
☐ I've had my share of interesting experiences on the open road, and my fill of near misses too, but during this road ride to Daytona I had a really bizarre encounter. We had crossed several bridges leading into Florida and this next one wasn't much different, except that it was considerably taller and more bowed at the top so you couldn't see what was at the crest. As the parade of bikes scaled the rise, I dropped back, totally intrigued with watching the lumbering grey tugboats push heavily laden tankers around the channel's murky waters—it was really interesting compared to what I'd seen for the last 2500 miles. Nearly hypnotized by the activity on the water, I hadn't noticed the flashing red lights and the black-and-white barrier arcing down across my path like a big cold hand. What the heck—Jesus, a drawbridge! It was too late to stop so I buried the Gold Wing's throttle and it lunged hesitantly toward the falling obstacle, seemingly oblivious to the do-or-die situation. The threatening hunk of oak took a swipe at my ducking head and just missed giving the taillight a deadly judo chop. The panic then turned to hysterics; I remembered the black Firebird jumping that huge gorge in Smokey And The Bandit and envisioned what it would be like sailing a fully laden GL into the chilly waters below—it scared me half to death. Luckily the bridge attendant waited till I reached the other side before opening the bridge's big jaws. Whew.—*Rich Cox*

☐ The trip to Florida had its moments, but none of them could match the crude humor of the Friday night Webco radio show during Speedweek. Announcer Roxy Rockwood brought Dale Singleton up on stage for the usual pre-race doubletalk, and noted pig afficianado Singleton took the opportunity to introduce his mascot—a baby pig named Elmer. Singleton claimed that this particular hog was chosen because of its striking resemblance to Taylor White, Singleton's tuner, which amused the tipsy crowd to no end. Singleton then began feeding Elmer from a baby bottle, but this turned into a mess when the excitement of the moment got to Elmer. The little swine forgot his manners and lost control of his precious bodily fluids about two feet from the microphone. The convulsed audience howled its approval as red-faced Elmer struggled to keep his footing on the damp tabletop. Singleton took the incident in stride, saying, "You know how pigs are, what goes in one end comes out the other."

Then to add insult to excrement, once Singleton and friend were safely off stage, Roxy chose the *Motorcyclist* staff as his next guests. Thanks a lot Roxy, how were we supposed to top an act like that? —*Jeff Karr*

☐ The "steak-in-the-lap" incident stands out in my mind as the capper to a cold and frustrating night in Van Horn, Texas on our way to Daytona. We were running late and it had been cold for five hours by the time we rolled into Van Horn, a lump of buildings in the Texas vastness. Checking six motorcycle riders into a one-horse motel seemed insurmountable for the TV-eyed clerk at 10:30 p.m., but after half an hour we were finally heading for the truck-stop diner across the street. The only table big enough for all six of us hadn't been cleaned from its previous eaters and was still cluttered with enough spilled food to make it look like a giant rectangular pizza. The waitress, to use the term cautiously, cleaned the table by using menus to scrape the spilled debris onto the floor, and then handed them to us. Jeff Karr made the mistake of ordering a "steak." While the food cooked we killed time finger painting in the grease on the table top. When the meal came we noticed Jeff sawing away at his steak with a knife to no avail, like trying to cut a truck tire with a nail file. During one mighty swipe the plate began sliding on the greasy table like a hockey puck, and down it went, steak, potato and about 400 soggy peas into his lap. Touring all day on a motorcycle and ending up cold and hungry in Van Horn, Texas can make a silly incident like this pretty funny, and we laughed for 20 minutes. Jeff left the meat, uneaten and defaced by several attempted knife cuts, tucked neatly under the edge of his plate—as a tip.
—*Jody Nicholas*

☐ Two experiences I had on our Daytona trip particularly impressed me. Watching Freddie Spencer's clean, crisp style as he masterfully motored around his competition on an underpowered Ducati in the Superbike event, holding third place for many laps, was really exciting. So was his incredible, near-winning performance the following day in the 250 lightweight race, as he and Skip Aksland traded the lead countless times, at one point rounding turn one almost touching fairings. It was some of the finest racing I've ever seen.



Also most impressive was the stunning countryside we saw from routes 666, 70 and 60 in eastern Arizona. Wide valleys carpeted with green spring grasses and dotted with patches of wild flowers were surrounded by imposing ranges of rocky mountains, their features accentuated by the sparkling glow of the late afternoon. For me this is the essence of motorcycle touring: rolling easily along roads winding through beautiful country, at one with a responsive, powerful machine.—*Maurice Brouha*

☐ As a teacher of motorcycle repair

for the last five years, I have lived motorcycles but felt a little isolated from motorcycling by the sameness of my life. After Daytona, that isn't a problem anymore.

Daytona: straight pipe Harleys, Coors with Pepsi labels, black leather, chains, drag racing on the beach, tolerant policemen, crowded bars, bikes cheek-by-jowl for a half mile on Main Street, the Harley-Davidson show, the Harley dealer's party, "Pops" Yoshimura relaxing in a lawn chair while his crew assembled three Suzuki top ends one hour before the race, Erv Kanemoto beaming after the 250 lightweight final, the Racecrafters' Z-1 being tested on a back road at 8:30 p.m., a dozen TZ750s seizing during final practice, the guy trying to leave the pits to race with one rod of his engine hanging out, the rider who tried to pick a fight with Reggie Pridmore after the race, the Z-1 with two engines, Singleton's pig, the Laverda that wobbled, the sand in the pits, Romero holding the pit board for Aldana, the AMA seat rule—it was grand!

It was good to get home. It was even better to go to Daytona.—*Joe Minton*

☐ You may know Jody Nicholas as a former *Motorcyclist* editor. More likely you recognize him as one of America's most skilled and respected modern roadracers. Or maybe you know him as the dirttracker who dominated professional racing at Ascot one season.

At the last minute before the tour was scheduled to depart, one staffer had to cancel out and we drafted Jody to fill the empty spot. Thus arose a somewhat incongruous situation: Jody Nicholas, ferocious, superfast racer used to sliding 170-mph racers around racetracks, a retired near-legend, herding a saddlebag-laden Gold Wing down Interstate 10. But even doing that you could see the man's skill. He could put a bike six inches from the right shoulder stripe and keep it exactly there for mile after mile. He never seemed to fall into the little traps that sometimes threatened the rest of us while riding in traffic. On twisting roads, Jody could ride any bike and look just as serene and unhassled as he did on the Interstates even though the rest of us were wobbling, bobbling and flailing frantically. If we pried hard enough, Jody would entertain us with stories of his adventures on racetracks with broadsliding Nortons or screaming Suzuki TR750 roadracers. Most of all, we each learned little things just by watching Jody ride. He was my most interesting experience on this trip. Heroes are heroes even when they're riding Gold Wings.—*Art Friedman*

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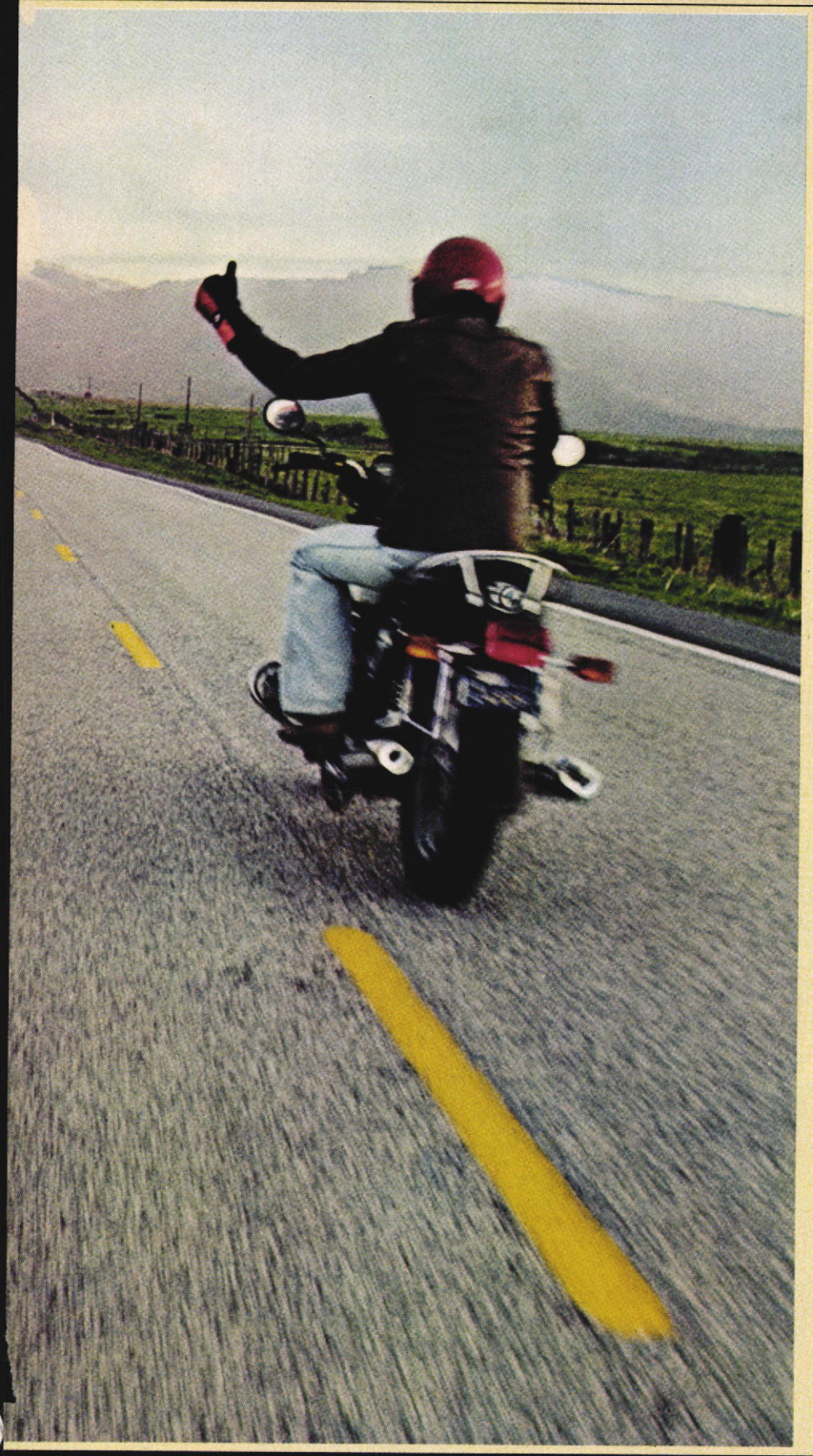


The bond between the rider and his BMW. Chances are he's ridden his bike long and hard. So he trusts it. He depends on it. He's proud of it. Because his BMW has the qualities he demands in a touring motorcycle.

Qualities like the riding comfort provided by a long-travel, high-compliance suspension. The superb cornering and effortless acceleration. And the matchless reliability of our brilliantly simple BMW flat twin.

All this and more make up the balanced performance concept. An ideal that is further refined in all our 1979 models.

A new internal drive shaft torsion damper gives even smoother power flow. The new stabilized ignition system is more precise and easier to maintain. New standardized controls are easier to operate. And BMW's exclusive cast alloy wheels add elegance at no extra cost.

The point is a BMW is more than a motorcycle. It's a friend. And as its owner, you'll get a knowing nod from the growing fraternity to whom a BMW is as much a way of life as a way of getting there. Because a BMW commands the kind of respect that goes even beyond the bond between man and machine.

Visit your BMW dealer and meet the 6 new '79 models. Including the exciting R100RS with its wind tunnel designed, integral cockpit fairing. And the metallic red and silver R100T, with factory-fitted clock and voltmeter, dual horns, chrome engine protection bars, and luggage brackets . . . all standard.

It may well begin a lasting friendship.

Bavarian Motor Works

THE TWO A

The bike on the right is a Yamaha road racer. The one and only five time Daytona Winner—and probably the most successful motorcycle in the history of road racing.

But there's one thing about this bike that's even more unique than its success.

It's for sale.

In fact, over 7,000 Yamaha road racing machines have been sold to the public.

And while we may not make any money selling racing machinery, we think it's the best decision we ever made.

Because instead of a few test riders on a track out behind the factory, we have thousands on tracks all over the world.

Out of their experience have come improvements that have changed every bike we make. And made some of them legends.

A good case in point is the machine on the left. Our one and only two-stroke street bike—the Daytona Special. If it looks a little like the TZ on the right, there's a reason.

You see, Yamaha's new RD400F Daytona Special is a direct development of our famous road racers. And not surprisingly, one of the most incredible motorcycles in the world.

First of all it is quick. In fact, it is the world's fastest accelerating 400cc street machine. Period.

The power comes from an engine that could almost be

The Daytona Special

AND ONLY.

described as a TZ for the street. Like the TZ, our Daytona Special uses the seven port inlet system we developed in European Grand Prix racing. But the Daytona Special also has Reed Valve Torque Induction for bottom end power—so much bottom end power that it will actually out-accelerate the TZ up to any legal road speed.

The frame—a double loop cradle—is basically the TZ250/350 Mark I, with slight modifications for the street, and for our new double cafe seat.

By now, you've probably guessed what the handling is like. You're right. Racer-quick and precise, you can adjust it for any rider, any condition.

Like the TZ racers, our Daytona Special also has a 6-speed close ratio transmission, cast aluminum wheels, and big fat disc brakes front and rear.

The new 4.3 gallon tank is even a modified racer design.

And like the TZ, the Daytona Special sports Yamaha's international team colors.

When you ride it, we think you'll agree that this choice of colors was appropriate.

Because this is a motorcycle that demands to be ridden. And ridden well.

In fact, for a serious rider, we know of only one other machine that will give you the rewards this bike can.

It's on the right.

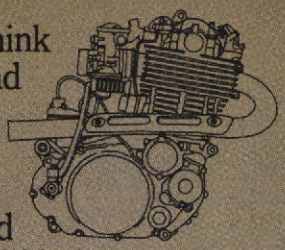
YAMAHA

When you know how they're built.

The Daytona Champ

THIS IS NO LONGER THE SINGLE, MOST IMPORTANT REASON TO BUY A TT500.

When you think of the off-road TT500, the first thing that should come to mind is one monolithic, long-stroking piston pounding out colossal amounts of steady, useable torque, right?



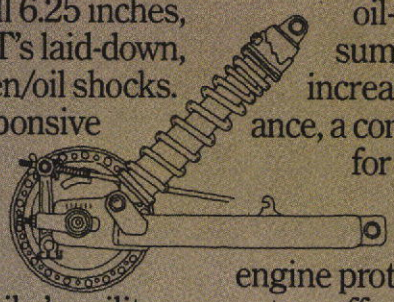
Wrong.

At least, not anymore.

It's not that the TT's 499cc, four-stroke, single-cylinder engine no longer performs magnificently. It does. From the bottom of the powerband clear to the top. And the wide-ratio, five-speed transmission deals out the power with smooth, workmanlike efficiency.

This year, however, we've added some improvements that will make the TT as prized for its handling as it is for its performance.

New leading-axle front forks, for instance, increase front suspension travel generously, to a comfortable 7.68 inches. Rear suspension travel is ample, too: a full 6.25 inches, courtesy of the TT's laid-down, adjustable nitrogen/oil shocks.



Of course, responsive handling is more than just a matter of inches. Since weight has a direct effect on a bike's agility, we trimmed a fair amount of it off the TT500. A slender new motocross-type frame, improved overall weight distribution and a new lightweight aluminum swingarm give the TT a much lighter, leaner look and feel.

The new steering head angle is another refinement. It provides better maneuverability and control over even the most arduous terrain.

Add to that features like oil-in-the-frame, dry sump lubrication for increased ground clearance, a compression indicator for easy kick starting and a wide aluminum bashplate for engine protection and you've got an off-road playbike second to none.

Yet, even with all the other things it has going for it, we realize there are those diehard off-road afficionados who will still buy the TT500 for one and only one reason.

Which is perfectly all right with us.

YAMAHA

When you know how they're built.

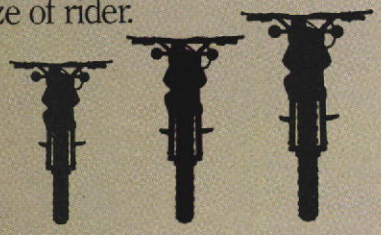
Lightweight aluminum gas tank.
Compression indicator lets you kick start with confidence.
New lighter motocross-type frame.
Radically upswept exhaust.
New long-travel, leading-axle front forks.
Adjustable, laid-down nitrogen/oil rear shocks.
New lightweight aluminum swingarm.
An all-ball-and-roller-bearing 499cc, four-stroke single with incredible torque.
Extra-wide aluminum skid plate.

THE HAPP

The Yamaha DT100 isn't just a dual-purpose motorcycle.

It's our dual-purpose dual-purpose motorcycle.

Not only will it eagerly run over almost any kind of surface, but it will do it with almost any size of rider.



GT80 *DT100* *DT125*

Because, as you can see above, it strikes a happy medium between a mini and a full-size bike.

This easy to handle intermediate size makes it a comfortable fit for both adults and kids, men and women.

And that makes it one of the few bikes that can be enjoyed by the whole family.

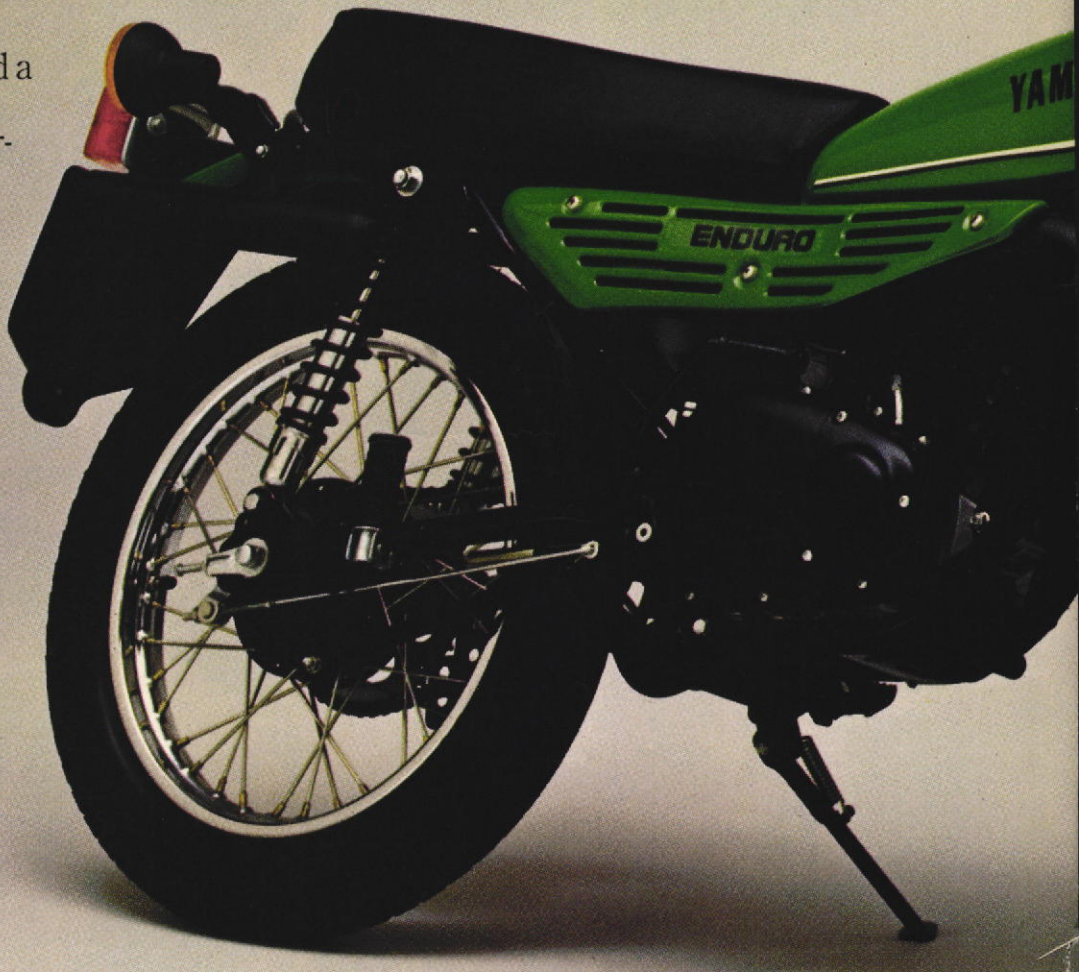
Our DT100 is especially handy for youngsters who've reached that awkward age—too big for a mini, yet not quite ready for a full-size.

But while we did compromise on the size, we didn't compromise at all on performance.

Like all of our DTs, the DT100 was designed from scratch for someone who not only wants to ride on both sides of the city limits, but who also wants to do it well.

We started with a rugged motocross-type double loop cradle frame, and heavy duty suspension. The rear suspension has progressively wound springs, with five settings. The long travel front forks have oil dampened shock absorbers.

The gutty 97cc engine boasts Reed Valve Torque Induction for plenty of low end



Y MEDIUM.

punch. And our two-stroke single is the simplest type of engine in the world. With only seven moving parts, there isn't a whole lot you have to worry about.

To get that power to whatever type of ground you're on, there's a smooth and precise 5-speed transmission. Not to mention all sorts of little niceties like complete street-legal lighting and instrumentation, center-mount exhaust system, primary kick start, flexible fenders and turn signals that are almost impossible to break off, Autolube (to automatically and economically mix your gas and oil), and a surprisingly low price.

So it's no wonder lots of people who already have one motorcycle in the family have decided that the DT100 is a perfect second bike.

After all, what's better than a second bike that can do a few things most first bikes can't?

YAMAHA

When you know how they're built.

Motorcycle Theft IT'S GONE

Why It Happens, How They Do It, What The Cops Think

By C.D. Bohon

Since we'd recently had a motorcycle stolen from us, we perked up our ears and decided to investigate when we heard the California Highway Patrol had broken a huge motorcycle theft ring. A few calls turned up the officers in charge, who were more than willing to give us not only what details they legally could about the ring bust, but also talk about motorcycle theft in general, why it's big "business," why they aren't enthusiastic about working on motorcycle theft cases, and what you can do to help deter someone from stealing your bike and, if it is stolen anyway, what you can do to assist recovery and put whoever stole it behind bars.

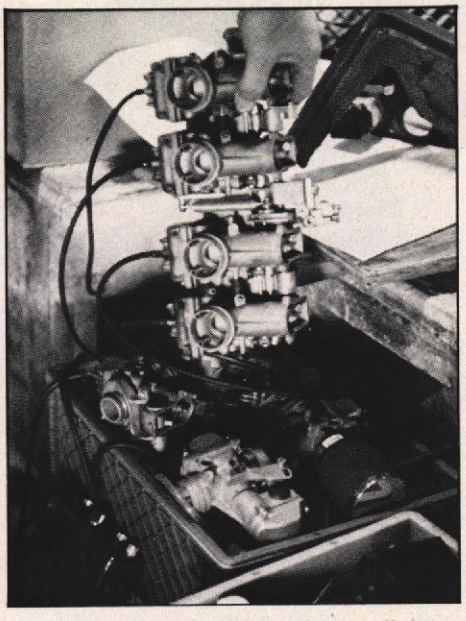
Acting on a tip from a confidential informant that a tractor-trailer cab was being stripped in the backyard of a residence, a helicopter unit, six plainclothesmen and four uniformed officers converged on an address near 107th and Normandie in south-central Los Angeles one afternoon recently. Perhaps alarmed by the helicopter—which had to be used to determine a crime actually was taking place and so give the police probable cause and the right to enter private property—the thieves had fled by the time the CHP officers arrived. But what they left behind, the partially stripped tractor cab, heaped piles of motorcycle parts and ten complete bikes—the motorcycle parts alone worth $100,000 "easy," according to one officer—made it clear the police had broken in on the largest known motorcycle theft ring in Los Angeles County and perhaps in the entire state of California. "We got there at 3:30," said one plainclothes detective, "and there was so much stuff to catalog we didn't get out 'til 1 a.m. It was unbelievable. Junk was piled up everywhere."

CHP investigators had suspected for more than a month before they moved in that a theft ring was operating out of the address, and they now believe the ring had been in operation for at least two years. The ringleader, identified by police as Lee Fultz, 39, alias "Uncle Bud," was arrested two years ago by Inglewood police and convicted of receiving stolen property—motorcycles and motorcycle parts. He apparently served no time, however, and was right back in operation in short order. He is a fugitive now and, "sleeping elsewhere," as one officer put it.

Fultz owns a repair shop in the area, "Fred and Uncle Bud's Motorcycle Shop," which specializes in Hondas and Kawasakis. All but one of the bikes recovered by the CHP were Kawasakis or Hondas. Police suspect that prime customers for Fultz's hot bikes and bike parts, marketed through his shop, were members of the King Cobras and L.A. Duces black motorcycle gangs. "Most of their bikes are stolen," said one officer. "Most of the bikes you stop in the Baldwin Hills area have blank frames and engines. They've got numbers assigned by the DMV to make them street legal, but they're hot. They go down to Orange County where the pickings are good, and steal them. There's no way you can prove it, though. I mean if you look you can see the headstock has been welded to get rid of the number and the engine case has been gouged with a chisel to get rid of that number—it's obviously stolen, but unless you can find a guy who can look at that bike and identify it as his with some kind of tangible proof, there's nothing we can do about it."

Wasn't there proof that Fultz and his gang were handling stolen bikes—you say you'd had suspicions—why didn't you just move in and

The backyard of motorcycle shop owner—and fugitive—Lee Fultz in the Watts area of south central Los Angeles was the headquarters of what allegedly was the largest bike theft ring in California. Seven-foot fence hid stripping operations. Every set of pipes represents a stolen, unrecovered motorcycle.



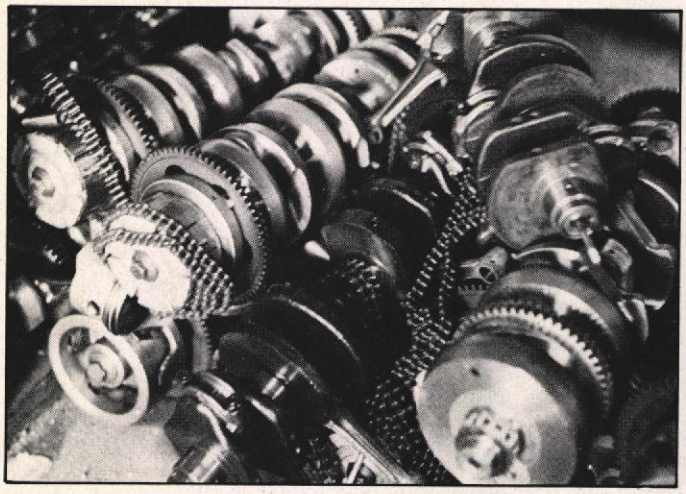
In Fultz's garage CHP officers discovered milk crates full of carb sets and other bike parts. Without a way to ID them, they cannot prove them hot.

PHOTOGRAPHY C.D. BOHON, JIM WEST

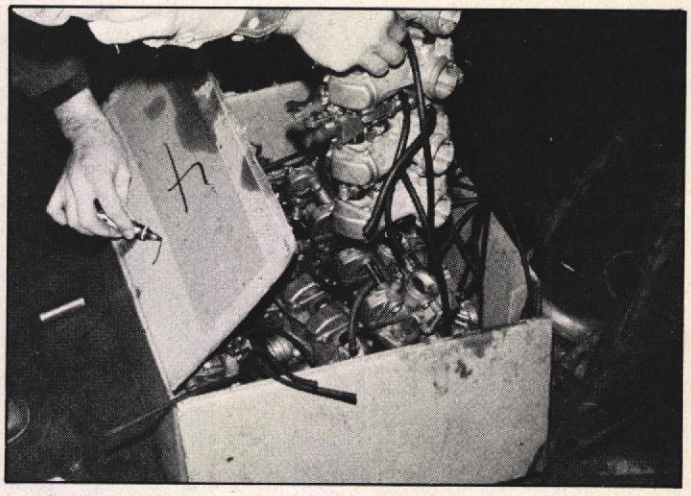
bust him months, years, ago, we asked. "We never had an open case. This was a residence. We have a right to inspect a shop, a place of business, for illegal activity, but not a private residence. To do that we'd have to be able to show evidence of illegal activity taking place. The guy's backyard had a solid seven-foot fence surrounding it. Without a hard reason to believe illegal activity was going on behind that fence our hands were tied." So that's why you had to have a helicopter fly over and eyeball what was going on—and scare away the suspects—even after you had a tip? "That's it."

"Fultz is probably back in business right now," said another detective. "There's so much money in it. Only three of the ten bikes we recovered were identified by their owners, the rest probably never will get back to the people they were stolen from. We had 15 guys look at one of the Kawasakis. None of them could identify it as his. Once the numbers are gone, how can you tell? They're all painted the same color, all look alike. A guy goes into a shop and says 'Hey, I bent my frame, I need a new one. Messed up my cases, too. Better get new ones,' and for 4-500 bucks he's got himself a motorcycle. He takes a phony receipt—it could be written just on a piece of paper—to the DMV, they assign a number and he's home free. It's easy money. Big money. The only way you can stop these guys is to incarcerate them. Fultz, with his record, will do eight to ten in the state penitentiary when we catch him." "But," put in another detective, "even if he's in jail he can still carry on his business. As long as he's got telephone privileges he can work. And he'll have to deal more stolen bikes to pay his legal fees. You can't monitor the phone calls—against the law—so he can do what he wants. He'll be treated like a hero in jail, get all the dope he wants, live good, come out with more money than when he went in. The way things are now, the way things are run in the courts and in the prisons, even if we catch him, that's the way it will be."

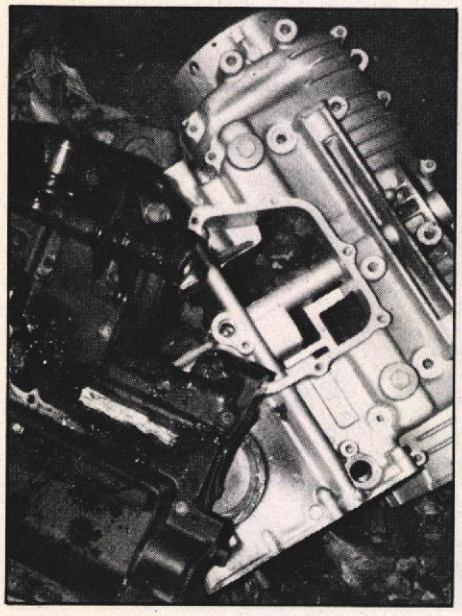
"Yeah," added another cop, "Before, if you stopped a guy, say, and you saw the bike was obviously stolen, like we mentioned, with numbers filed off, you could go to court and say, 'Look, this bike has been stolen. It shouldn't be given a number and registered for the street. It should be impounded or destroyed.' But last year that law was overturned—due process or something. Now if a guy



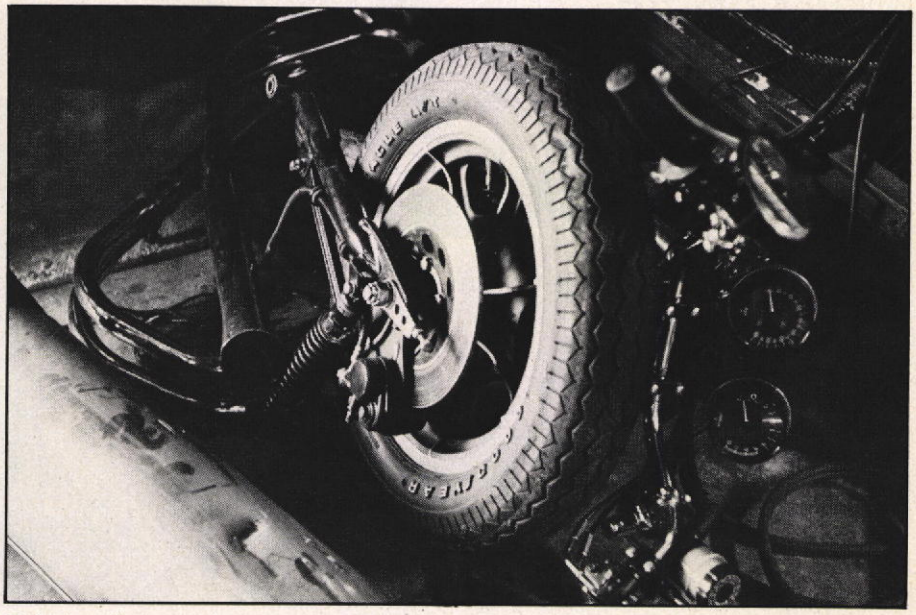
Each one of these cranks is worth $600. Scores, perhaps hundreds, passed through the hands of the gang that ripped off these. All the police can do is impound them temporarily; there is no way to identify the owners.



A CHP plainclothes detective marks a box of carburetors the night of the bust. Had the owners engraved their driver's license numbers on them they would have them back now. As it is, they may have to be returned.



Take a close look at the lower right corner of this shot: crooks used a chisel to gouge off the serial number from this topside Kawasaki case.



This is all that's left of someone's brand new Kawasaki LTD after the bad guys did their thing. We lost an LTD—maybe this one—which we had wedged between our car and an embankment and locked. Had we marked wheels, pipes, shocks, swingarm, we could prove this was ours and get it back.

IT'S GONE

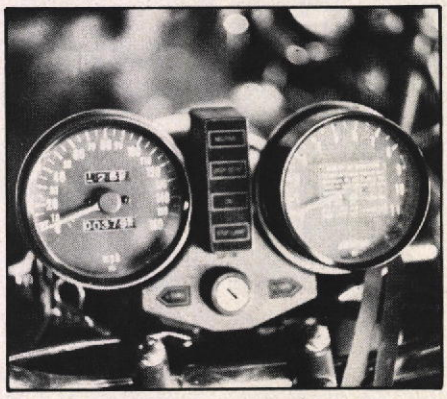
brings in a bike like that we have to assign a number. They laugh at us. We can keep the bike 30 days or whatever it is, but they know in the end we have to return it to them. And give it a legitimate ID number."

The CHP officers sound discouraged and not a little disgusted. "We're a good outfit," one says. "We've got 15 guys working on vehicle theft. Last year we had 16. A few years ago we had 24. We had a special motorcycle theft unit apart from auto theft. It takes a year and a half to learn this job. Most other enforcement agencies have maybe one man working vehicle theft. He's swamped. What can he do? He shuffles paper. We *investigate*. We make arrests. We make cases. We get convictions. Better than 90 percent of our arrests result in convictions. The DA has complimented us on how well we make cases that stick. But they're cutting our budget. We used to have federal funds. Now those are gone. And Proposition 13 has cut our state budget. The whole unit will probably be disbanded soon. It will be a wide open county then. In '77/78 we made 4018 arrests for vehicle theft. In fiscal '78/79 they cut our budget by $300,000 and we lost one man. But we made 4400 arrests. Ninety percent-plus convictions, remember. What's going to happen when we no longer exist? You tell me what it's going to be like." Another officer adds, "Over the last six years we have recovered $2.50 worth of stolen vehicles for every dollar the state budgets for us. We're cost effective. But they ax us. They should be able to cut the fat somewhere else. Right now we're working on 400 felony cases. Those would go back to the local authorities. They're overwhelmed now. They couldn't handle it. It's too much."

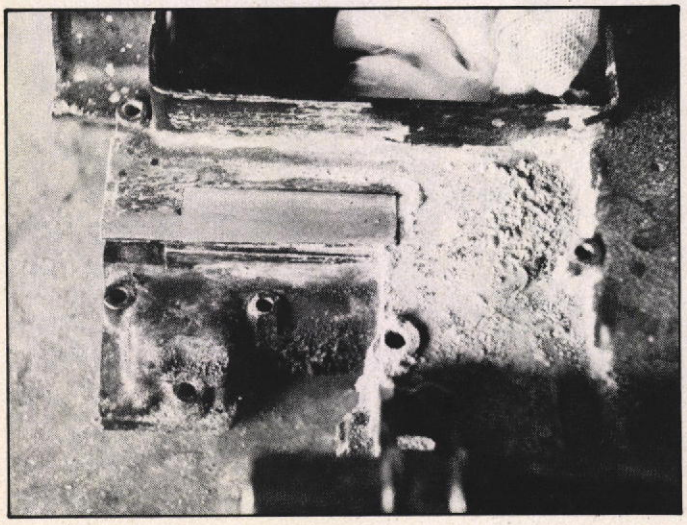
In 1978 16,967 motorcycles were stolen in California. Only 59 percent were recovered despite the best efforts of special police task forces like that of the CHP. This compares with a 93 percent recovery rate for automobiles—110,000 of which were stolen in 1978. The only vehicle type with a lower recovery rate than motorcycles is trailers. Truck recoveries run around 90 percent, RVs 76 percent. Why the poor recovery rate for motorcycles?

"They're just too damn easy to steal, and too easy to alter. The Jap bikes have only got the two numbers, one on the headstock, one on one of the cases, and they're not stamped in deep. It's easy to get rid of them. The factories should stamp frame numbers in at least three places. Both cases, cylinders and heads should have numbers. The fork locks should be heavy duty. There shouldn't be numbers on the locks and keys. And you should have to prove ownership and bring in the old parts before they sell you a new frame or cases. Or key. Now anybody can just walk in and get a key. He sees a bike he likes, gets the number off the lock, goes to a dealer and says, 'Hey, I lost my key,' and gets another one just like that. It's just too easy. Even without a key you can steal the big Hondas so easy it makes you sick. You just switch the fuses around and the damn things start. You can't use the electric starter. But you can kick start it. Only takes 5 or 10 seconds for a guy to get one started." That was hard for us to swallow, but the officers showed us. We tried it out on a Honda 550 in our garage. Took us maybe 30 seconds, but then we'd never done it before. It scared us. It is easy. Too easy. Way too easy.

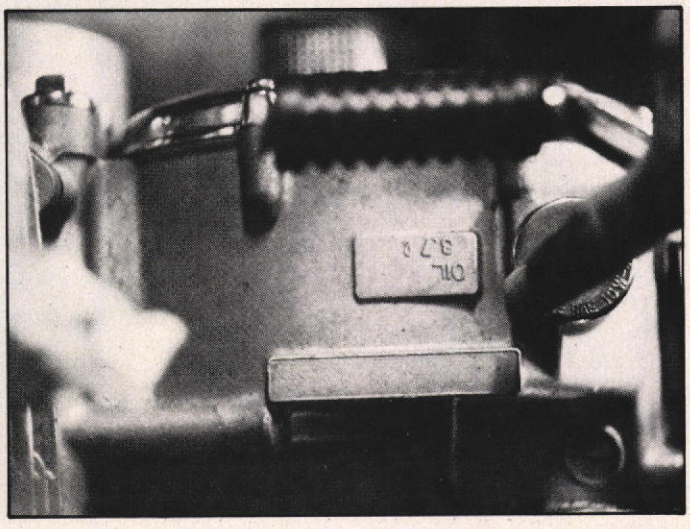
"The factories don't give a damn. The more bikes get stolen, the more Honda and Kawasaki sell. They don't care," said one detective. Is that why so many Hondas and Kawasakis get stolen? "Pretty much. Harleys aren't as attractive any more. They've got more numbers—numbers on both cases, and they're stamped in deeper. They don't have a fork lock, but they've got provision for a padlock and a good padlock is better than those cheap fork locks the Japs use." Do fork locks really work, do they deter thieves? "Well, if they want your bike, no matter what you do they'll get it. But most of the bikes that get stolen are left unattended outside without the fork locked. That's an open invitation. In fact one of the three recovered and identified bikes we got this time was stolen when the owner dodged into a store to get a candy bar. He pulled up to the curb and was gone less than five minutes. Didn't bother with



Some proud owner only had a chance to put 379 miles on this Kaw before it was stolen. All but one of the recovered bikes were new.



The CHP acid-tested this case to see if they couldn't raise a trace of the serial number the gang had filed off. As you can see, not even a shadow remains. Cops feel the factories should stamp the numbers in much deeper.



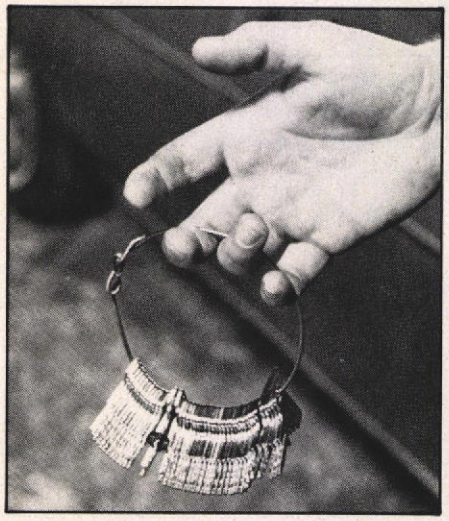
Policeman's finger points to the blank serial number plate of a new case the thieves put on one of their allegedly hot Zs. If cops can't prove the bike is stolen, the DMV will have to assign a number, making it legal.

the fork lock. When he came back the bike was gone. He was lucky. He'd put a piece of tape under the seat to hold the spare key. It was still there when we recovered the bike. That was enough to identify it as his. He was lucky though. These guys pull triple switches. They take parts from one bike and put them on two or three other bikes. So you can't tell what was what originally. What belonged where. So you should mark every piece of your bike. Put your driver's license number on every part with one of those engraving tools. Your DL number can identify the bike in every state in the country as yours. Mark the fenders, gas tank, mirrors, seat, wheels, frame, engine parts. Mark everything. We've got piles of parts with absolutely no way to identify who they belong to. Hell, you pay thousands of dollars for a bike, take the time and spend a little money to make sure you get it back if it's stolen. Don't figure you won't be hit. Don't kid yourself. The money involved, you're going to get burned sooner or later."

"Just because of that the factories *are* getting worried," put in another officer. "So many bikes are getting stolen that insurance rates are getting so high it's cutting sales. A lot of companies won't even insure bikes anymore. We spent about a day recently talking to Honda, telling them what to do to help keep their bikes from being such easy marks. They are concerned."

In fact Honda has developed an Identification Program for replacement motorcycle frames and engine cases. The basis of the program is the use of control numbers and documentation for replacement cases and frames as well as an exchange of old parts at the time of sale. How effective this program will be rests with Honda's dealers. Kawasaki tried a similar program in California, but after about a year dropped it in the face of dealer resistance. Dealers considered it, according to a Kawasaki spokesman, too much of a hassle. "They didn't like the paperwork. But it was effective when it was implemented. We caught some guys from Compton (south-central Los Angeles county) going across the border to Phoenix to buy frames. They weren't doing that just to get some fresh air." The Kawasaki spokesman went on to say it was up to dealers, even without the program, to make theft less easy. "Now most dealers have a box of keys sitting on the counter. You just fish through it till you find the key you want. They shouldn't do that, but they do. We can't force them to stop the practice. They're independent businessmen."

According to the Honda spokesman that company doesn't sell keys, at least the dealers are not supposed to. "If you lose your key you have to buy a whole new ignition/forklock



According to the CHP, these are all the keys you need to start any Honda made. Honda disputes this, but cops would still like to see more keys.

WHY DO PEOPLE STEAL MOTORCYCLES?

"I'm not saying nothing, understand, but I know what it's like, I know where those brothers are coming from. You see what I'm saying?" Is your bike stolen? "*No,* man, it's not stole. I don't have nothing to do with that. But I understand. I know." The speaker turns and spits. He's wearing a red bandana on his head tied like a cap.

You're in Watts. The ghetto. Wide streets grid small, dirt-patched lawns overrun by riots of long-neglected shrubbery, chickens, dogs and runny-nosed kids, has-been Cadillacs waiting for transmission jobs. At street corners are House of God People's Baptist Churches and diners with boarded up windows and names like The Chew And Chat. The bungalows need paint. Some are abandoned. Some are burned out shells. Vacant lots littered with garbage leer like the almost empty sockets of a skull the ants haven't quite finished with. The distant hum of late model Granadas and Oldsmobiles speeding along the Harbor Freeway from downdown Los Angeles to the suburbs mingles with the rumble from rusted-out mufflers idling at a nearby traffic light. It's the promised land of Southern California turned into a hell of boredom and despair. It's Watts. It's the ghetto.

They steal bikes down here. Those who steal them are just like you and me, guys who like bikes, guys who want 750s and 1000s. But guys who haven't a whore's hope of ever getting a respectable job in a decent neighborhood—and a loan so they can *buy* a bike. Insurance companies redline. Banks redline. Savings and Loan companies redline. Redlining means they draw a red line on a map and say whoever lives inside that line doesn't get our money. We don't want their business. So those trapped inside that red line, inside the ghetto, steal. They steal bikes. Our bikes.

"Your buddy's got a bike. You don't. So you go out cruising till you see a bike you want. You take it. Why not? Ain't no other way you ever gonna get it. You take it. That's all. It's easy. Guy loses it, he don't care. It's insured. He'll get another one. Maybe that one get stole. Don't matter. Insurance company pay. And if it don't, so what? He got a job. He can afford it. The brothers steal bikes, they ain't got no jobs. Can't get no jobs. Maybe don't *want* no jobs. Not no more. You give up after a while, see? Door slammed in your face one too many times. You get mad. You don't care. You want that bike. You gonna get it. Then when you on it, don't nothing matter. You're riding, see? When you're riding, don't nothing matter no more. Don't matter you're black, you're poor, you got nothing and damn well never will from here to hell. *Don't matter.* You're on that bike. You're free, man. They can't touch you. The Man go by in his car. You wave. He can't touch you. Even when he stop you, hassle you—and he'll do that, don't you ever doubt it. Cruising down the street, he'll stop you, some chicken reason, lemme see your turn signals work, your taillight burned out, you know, something he gonna stop you for. But it don't matter, see? You got that bike. They take it from you, you get another one. It's easy. Then you ride. You ride and nothing don't matter. What? Sure nobody'd steal if they could have the money to buy one, but she-it, you and me know that ain't never gonna happen. Not in nobody's *dream* even. We know how it is, who we are. You can't kid us." The speaker gets on his metallic pink dragbike-style Honda 750, punches the starter viciously and roars off, the rear 16-incher squealing every shift. He's angry. Just talking made him angry. Riding allays his anger, makes him forget he lives inside a red line. To ride, he must steal.

IT'S GONE

unit, with new keys. We're not about to send key blanks out all over the country." But, the spokesman admitted, what the dealers do is up to them. "We're trying to educate our dealers and their customers. It does not help us when one of our motorcycles is stolen. We've recently announced a new insurance program that will save owners 25 percent. In order to offer this we've had to initiate the parts exchange program, tie up with the National Automobile Theft Bureau and put out a bulletin detailing steps owners can take to help prevent their bikes from being stolen."

The steps are simple: lock the bike, identify the parts with your DL, put your name and address in the owner's manual—which is often recovered with a bike, right where the owner stowed it.

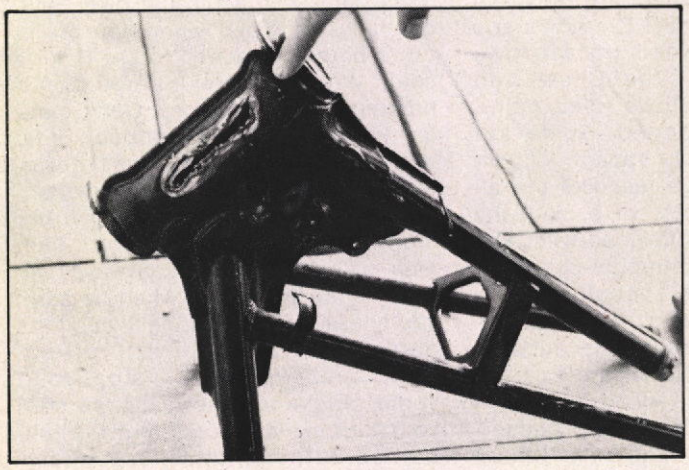
Our Kawasaki man agreed these steps would aid recovery. "But," he said, "we're more interested in preventing the theft than aiding recovery, although that, naturally, is important. We're thinking now about either providing tabs so you can put on a padlock, or actually incorporating a lock in the centerstand, so you can lock it down. That would put the rollaway thief out of business. We've got a few other things we're looking into, too." Alarms? "No. It's too easy to get around them. People are freezing them with a blast of C02 from a fire extinguisher. You can even muffle them with shaving cream. They're just too easy to get by. Locks, ID numbers and a secure parking area. That's the way to go."

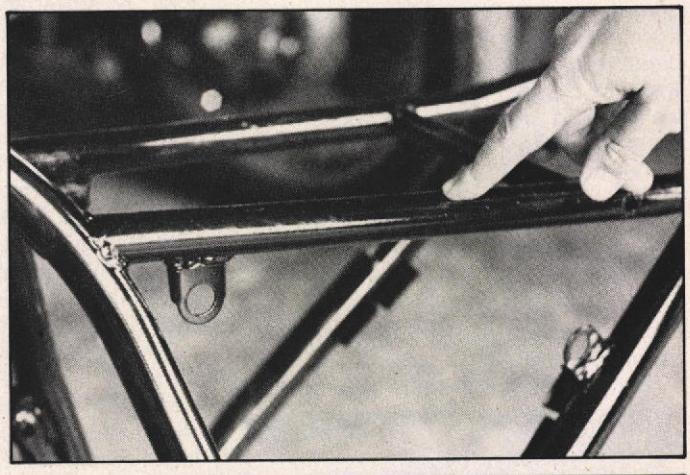
The CHP officers would also like to add multiple colors and other distinguishing marks on each model year's bikes. "Now," said one investigator, "what have you got? Two or three, maybe even only one color for a bike. They all look the same. How can you tell one from another?"

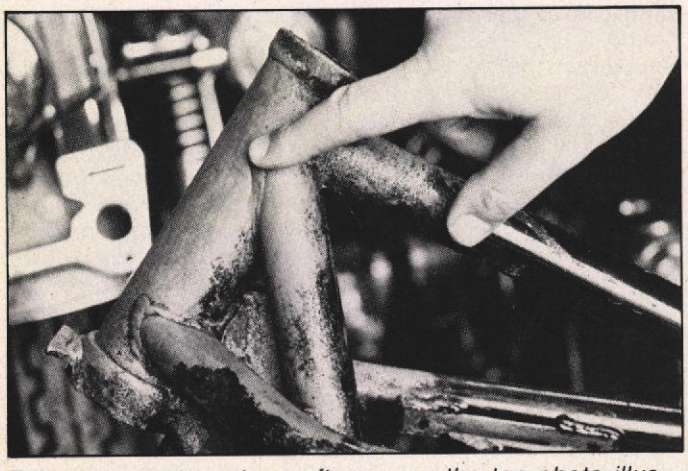
In the meantime motorcycles are getting more expensive, more attractive targets for thieves, whose profit margin rises with the price of the bike. Yet they are just as easy to steal as they were 10 years ago when they didn't cost so darn much, and, as a result, are rapidly becoming prohibitively expensive to insure, and in some places uninsurable. "I've heard in some cities you can't insure a 1000 Kawasaki for anything," said our Kawasaki spokesman. "Too many get stolen."

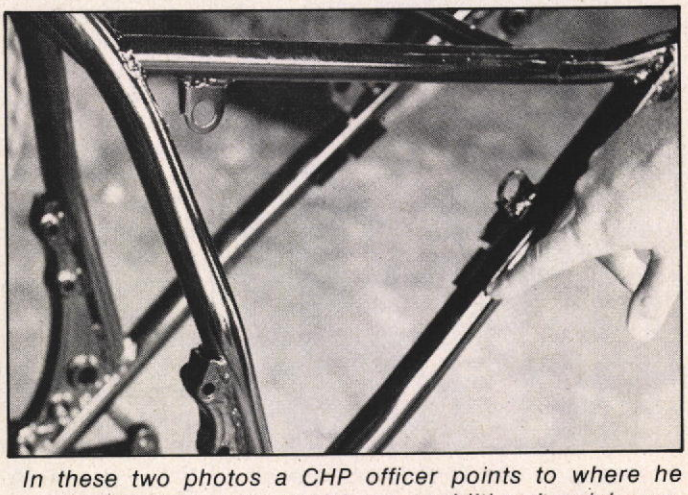
"I believe it," agreed a CHP officer. "I used to have a Kawasaki. I like bikes. That's why I work this division, why I fight the bike stealers, although sometimes it's like we were plowing the sea. I had a bike. But I had to sell it. The insurance premiums got to be too much for a family man."

When we visited the warehouse where the Highway Patrol is storing the loot recovered at "Uncle Bud's" backyard clearing house, the CHP told us that besides the recovered bikes, they had found an additional 50 owner's manuals, each representing a stolen and unrecovered motorcycle. We ourselves counted 23 gas tanks amid the booty, not counting those on bikes. There were boxes of carb sets, cranks, engines, frames. When we calculated how much all of it was worth, and considered that this was an ongoing operation dealing day in and day out year after year in tax-free, overhead-free, all-profit or nearly all-profit luxury merchandise, we couldn't help remarking rather glumly that we were in the wrong business. Agreed a cop, disgusted with the situation, "Hell, we all are." M



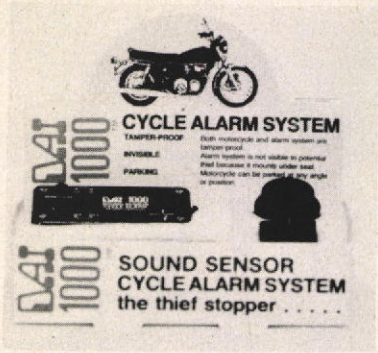






Thieves are not master craftsmen, as the top photo illustrates. They just take a blowtorch to the headstock, weld any trace of a serial number into oblivion. Lower shot shows sanded down steering head. Look ma, no VIN.

In these two photos a CHP officer points to where he would like to see the factories put additional serial numbers. Thieves couldn't take a blowtorch to the frame at these spots without ruining it. Put on your own ID.



CYCLE ALARM SYSTEM

Breakthrough

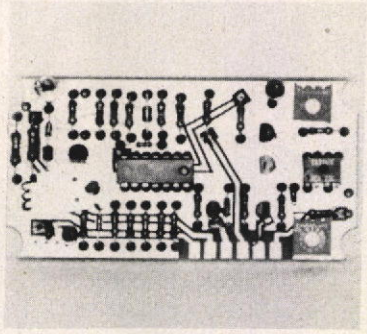
D.A.I. 1000™ CYCLE ALARM SYSTEM
SOUND SENSOR

the thief stopper . . .

SIZE IS EVERYTHING IN LIFE

The D.A.I. 1000 Sound Sensing Alarm does not mount on the license plate or handlebars where it can be seen and disarmed. This system is only the size of a cigarette package and mounts **under the locked seat of** your motorcycle. It is designed so the owner of the motorcycle cannot disarm it without the alarm sounding, so, again, it is virtually impossible for a potential thief to disarm it. Once you insert your key into the seat lock the alarm, if adjusted properly, will sound until you turn the switch off. A pulsating ear piercing horn is included or your D.A.I. 1000 can activate any 12 volt sounding device if desired.

SOUND SENSOR



SMART SYSTEM

When arming your D.A.I. 1000 system, simply unlock your seat, turn the on/off switch on and re-lock your seat. When the on/off switch is turned on you will hear a short "beep" indicating your system is powered. You then have approximately 20 seconds to lock your seat and leave your motorcycle. Any intrusion after that time will set the alarm off. The smart system continues the alarm for 60 seconds after which time it will shut off and re-arm itself. If the disturbance should continue, the alarm is designed to continue sounding until 60 seconds after the disturbance stops. A wide sensitivity range is built in with an external sound adjustment in order to isolate outside noise when desired.

A DIFFERENT BREED OF CAT

The D.A.I. 1000 Sound Sensing Alarm System is the only device of its type. Other anti-theft systems can only be activated by movement of the motorcycle. The D.A.I. 1000 is designed to detect any sound made as a result of tampering with the motorcycle. Now your valuable motorcycle is not only protected from potential theft but it is virtually impossible to strip any components without the alarm system sounding.

Compare these features and your choice will be clear. The D.A.I. 1000 sound sensing system is your thief stopper! ! ! ! !

See your nearest dealer OR. . . send a check or money order for **$59.95** to. . .D.A.I. Security Systems Division. Shipping will be paid by D.A.I. Calif. Residents add 6½% sales tax. Credit card orders may call our order desk collect. If not completely satisfied return system within 30 days for full purchase refund. ORDER NOW! ! Insurance company discounts are available in many states with installation of the D.A.I. 1000.

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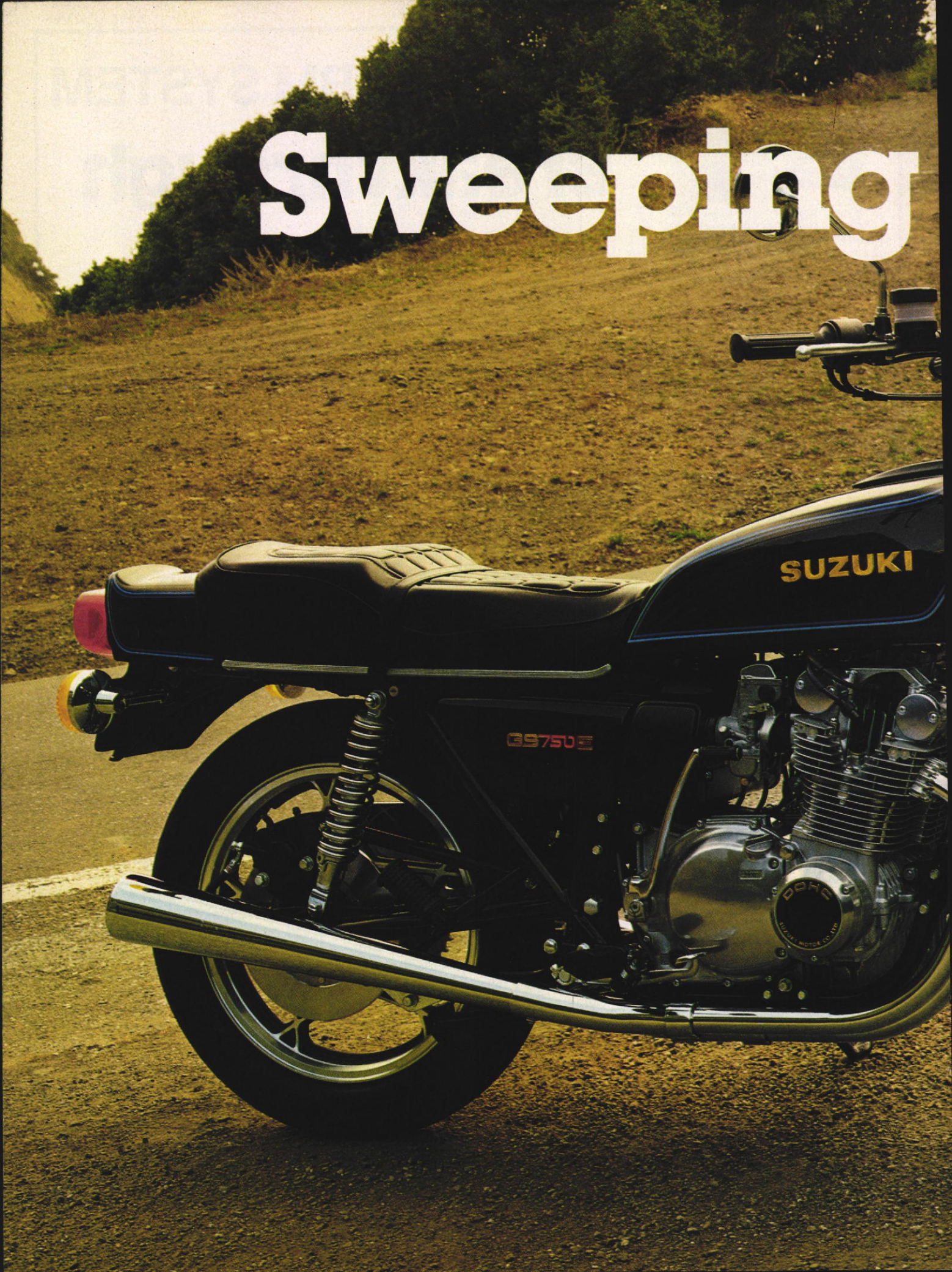
D.A.I. 1000™


Sweeping
SUZUKI
GS750E
DOHC

Beauty.

When it comes to all-around performance, nobody out-performs Suzuki.
Case in point: The GS-750E.

Clean Sweeps. It'll sweep low into a corner and come out smooth and clean. Reasons are light weight, balanced design and a superb suspension.

4-Stroke Mill. Powerful DOHC 4-cylinder engine is both rapid and reliable. Four Mikuni VM26 carbs offer instant acceleration. Roller bearing crankshaft provides dependable high-RPM performance.

Quick Stops. Good brakes are a must on any bike. Great brakes are standard on this one: Twin discs up front and a big disc in back.

Well Dressed. This beauty boasts such plush plumage as a custom dual-passenger seat, push-button starting, digital gear indicator, stylish mag-type wheels and high-performance tires. You can also take comfort in knowing it's built to stay on the road and out of repair shops.

Now you know why the GS-750E is one of the world's great performers.

Suzuki. The performer.

SUZUKI

Ride safely: wear a helmet, eye protection and appropriate riding apparel. Member Motorcycle Safety Foundation

Kenny Roberts

After The Fall

By Rex Reese

Exactly What Happened In The Japanese Crash?

When Kenny Roberts crashed in Japan recently at Yamaha's test track, he was still basking in the glowing adoration of a proud American motorcycling public. One year previously he had gone to a Europe skeptical of his abilities to cope with strange tracks, the food, endless travel, foreign languages—an environment he had never fully experienced before. Kenny overcame these differences, beat the odds and Barry Sheene, and seized the 500cc World Championship in his first season out. Europe had every reason to be in awe of KR. America had every reason to be proud. He would soon be defending his title, and since Europe pays start money based on the previous season's performance, he was also about to collect many hundreds of thousands of dollars on the GP circuit.

All of that came to a sudden end as Kenny tried to avoid a hole in a third-gear corner, slid out and hit the wall while testing the new racers for 1979. The shocking announcement of the crash—the only serious one of his career—had the news media in this country reporting that Roberts had suffered a broken back, broken limbs, was paralyzed—and worse. Some people, particularly in Europe, even thought that Kenny had been killed. The rumors were powerful enough to stop a few hearts. Fortunately the facts were different.

Kenny Roberts is alive and well in his home town of Modesto, California, a quasi-rural city 80 miles from San Francisco. His two-story house juts out from the grassy outskirts of town like a pastel iceberg in a sea of green. A silver-gray Mercedes-Benz 450 SL is parked in the driveway next to a Ford van and a station wagon. A motorhome, not unlike the ones that he and tuner Kel Carruthers paraded through in Europe, is parked in the grass on the east side.

The inside of the World Champion's home contrasts sharply with the man who makes his living going so fast. It is, for the most part, on the dark side, cool, brown and comfortable—very soft looking. Antiques are everywhere, like the solid brass cash register that sits prominently on the sink counter in the kitchen. Because of the injury Kenny spends a lot of time in the living room, lying on a cot covered with a sleeping bag, watching television. Despite popular myth, he's actually quite healthy looking—not at all crippled, incapacitated, no body cast from head to toe. He does wear a body brace, however. With it he has to either lie down or stand up straight—any other position being not too comfortable or healthy, although he did bend over a few times while shooting a round of pool after lunch.

Lying on his cot in the living room, Kenny is bathed in the diffused sunlight that filters down through a nearby skylight. It takes the rough edges off the features of his face, making him appear very reverent and pure. It is about 11 a.m. on a Sunday.

MC Can you go into any detail about the crash in Japan?

KR Well, it happened so quickly. I was doing a hundred miles an hour or better. When the track was built, it was really safe by the standards of the day. But the standards have grown a lot, so it's a safe track, but not as safe as it *could* be in this particular spot.

MC This is Yamaha's test track?

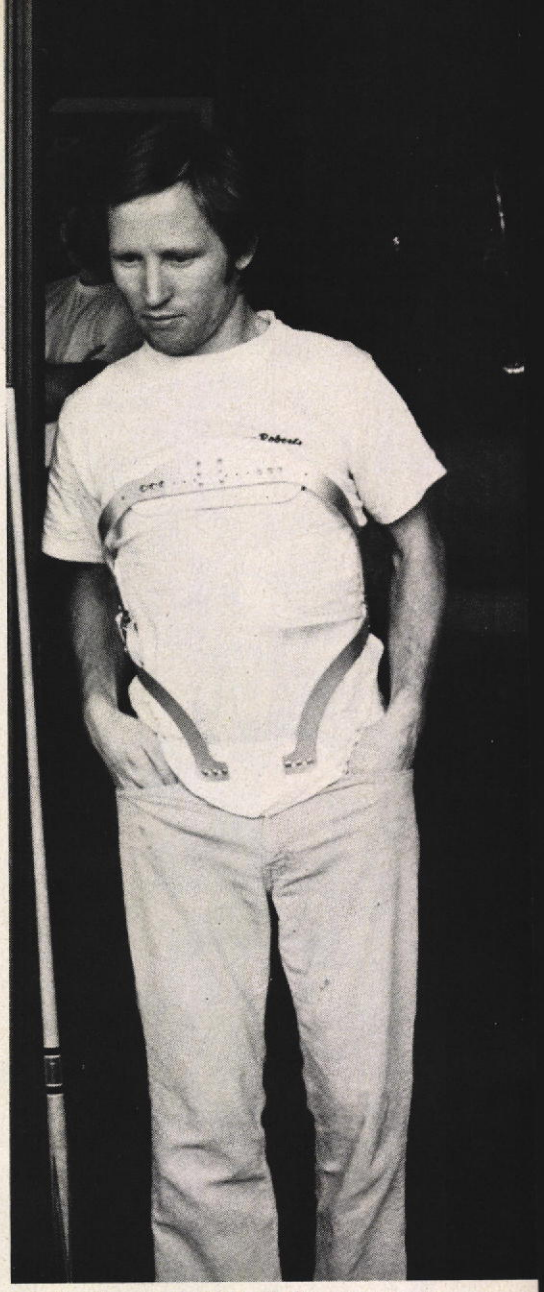
KR Uh huh, the test track. Of all the corners I could have picked to fall off in, it's probably the worst one.

MC Where did you fall?

KR The big corner before the straight, which is wide-open third gear. I went into it a little lower than I should have. I was just learning the track.

MC What lap were you on?

KR I was probably on my fourth lap on this particular bike and we were going to change the front tire and a couple of other things, but I had to start getting my lap times consistent. I wanted to go 4 or 5 seconds faster than I was going at the time. So I did get the lap time down, and just when I thought I was consistent enough, I was going to do one more lap on this particular run, and was thinking about that at the time. I was trying to miss a hole and I went to the inside to miss it, instead of the outside where the Japanese riders run. I didn't know where they ran until they said, "we go to the outside, of it." The race track could have been a little bit slippery, because when I bent the thing in I didn't run out of road. I was going faster than I was previously and got it all the way over, which meant I was going as fast as I could. The front tire washed out.



MC What tires were you using?

KR Goodyear. It wasn't anything that I could blame anything on. I could say that the race track was a little slippery, that I hit oil. But I really don't think that there is one thing that caused it—just racing. The wall is fairly close to the track, because as soon as I was in the grass, I was into the wall. It is lined with a foot of styrofoam which absorbed a lot of impact, because I hit it with my butt wide open. It threw me up in the air and threw me down three or four feet from the bike, and that's where I ended up. I just lay there. All the impact went to my spine and cracked my 12th vertebra and also ruptured my spleen.

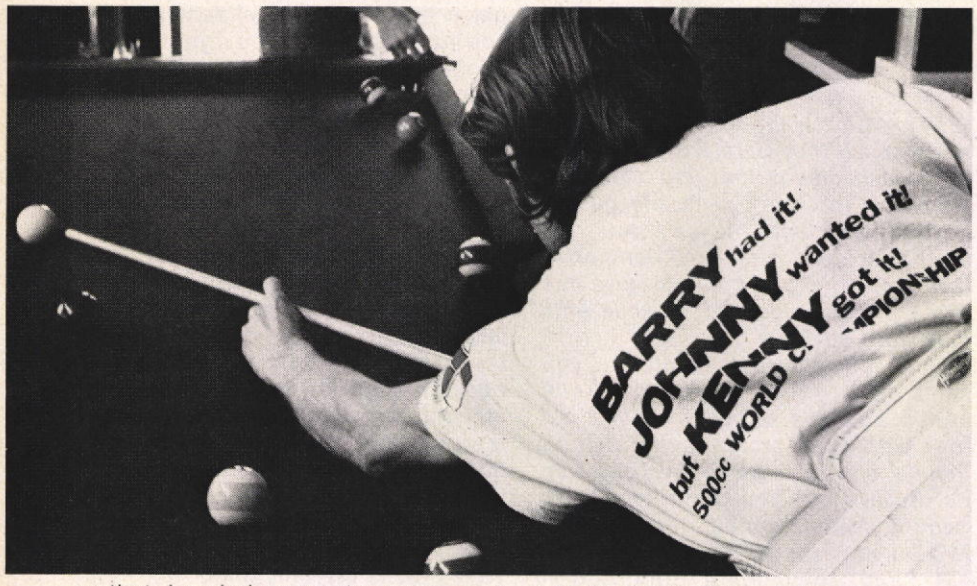
MC So you didn't roll at all?

KR No.

MC You just thudded.

KR I slid on my leg for a while on the pavement and got a good raspberry

PHOTOGRAPHY: REX REESE, COURTESY YAMAHA



on that. I ended up on the grass next to the bike and I knew my back was hurt. I also knew my foot was hurt. The foot injury turned out to be a previous break I didn't know I had. This time I just sprung it real bad. I think because of the impact they put it in a cast, but it wasn't really broken seriously.

MC Did you know that you were in bad shape when you crashed?

KR I *knew* I was in pretty bad shape once I caught my breath. I knew that there was a problem. I took my helmet off, but just lay there—there's no sense getting up and dancing around. I knew it was going to take Yamaha a little while to get there. They had an ambulance, and so it wasn't too long before they were there—it seemed like right away, actually. I said, "just put me on a stretcher and get me to the hospital. I'm hurt."

MC Did they take you there right away?

KR Yeah. It took 20 minutes or so to get to the hospital. I knew my back was hurt, and I knew my insides hurt and I couldn't breathe. I told Kel to make sure they checked my spleen, so they did right away. It was bleeding and it wasn't enough to really bother me, because it hadn't filled up my stomach yet, although my stomach was starting to really hurt. They stuck big needles in it to see if blood was filling the cavity up. It wasn't, so they said there wasn't any internal bleeding, or there was a little internal bleeding but not enough to worry about. Probably just the shock of hitting the thing—the impact. Well, it never did heal. It just got worse.

MC Did it go on like that for a couple of days?

KR Three days before they operated on me. They moved me to another hospital that was a little better, and the doctor was a little better.

MC Where was the hospital?

KR I don't even know.

MC When you crashed there were a lot of stories over the radio and TV that you were really bad—paralysis, broken legs, things like that. You weren't that bad off, were you?

KR Not that I know of.

MC Do you know where anybody got any of these ideas?

KR Yeah. When they say you've been hurt, and they don't say *what,* everyone just starts making his own story. "Oh, he's got a broken back, and he's got a broken foot, his insides are bleeding." All of a sudden you're on the critical list. Europe was calling, America was calling—*the whole world* was calling Yamaha. There was no press release right after it happened. Yamaha didn't want rumors to get started, so they didn't tell them *anything.* So naturally everybody just assumed it was real bad and it got pushed out of shape; which it would have, no matter what. But it would have been a whole lot less if they would have said, "this is what's wrong and this is what we are doing."

MC You were hurt, of course, but were you in great danger?

KR They didn't tell me much. I lay there for three days in pain. They didn't like to give pain shots because it stops your stomach and everything from moving. Then they said they were going to operate on me. I was a little worried about that. I said, "Well, if you're going to operate on me, why wasn't it done when I first got here?" Sometimes the spleen heals by itself they said, but mine didn't. So I said, "Well, I'm not going to be operated on here. I want to go home." They said there is no way you could make it home, so we're going to have to operate. It wasn't a tough operation: they went in with the attitude that they were going to sew the spleen up if that was the problem. I don't think there was any talk about taking the thing out. If it was too bad, I guess they would have. It was an hour operation, they sewed up the bleeding and came back out. I mean there was no real problem.

MC So the operation was really nothing extraordinary.

KR Nothing extraordinary. It was a standard procedure and they had a good doctor. Yamaha had the best doctors they could find.

MC Anybody from the U.S.?

KR The doctor in charge of the whole thing—a bone specialist—studied in America for two years and spoke very good English. They took very good care of me. I can't complain that I didn't have good doctors and therefore I'm not healed by now because they did an excellent job. Everybody there did a good job. The only thing they were lax on was the press because no one would tell

Roberts Interview

them what was going on. No one really knew for sure what was happening. No one really explained everything to us. I mean it was a matter of how I thought I was healing at that point, but then they came up with an operation which really made it complicated. I had to stay in the hospital for two more weeks. They said three at the time without eating or anything. That's what complicated everything: the spleen, the stomach.

MC That was your worst problem?

KR Yeah. If the back was the only problem, they could have put me in a cast and I would have left Friday. I got hurt Tuesday. When my wife got there it was Thursday and they said that they were going to operate. When they didn't say why, everybody jumped to conclusions that I was bad off.

MC How much weight did you lose while you were in the hospital?

KR 12 pounds.

MC Not much.

KR Well, it's not much if you are overweight. But 12 pounds to me is a lot. I went from 138 to 126. I just lost all my arms, my legs and my stomach.

MC Are you back to a normal weight again?

KR No, not close.

MC Can you eat?

KR I gained about 5 pounds since then, but it's going to take me awhile to get the rest of it back. I can eat everything, no problems.

Later in the afternoon at a lunch consisting of take-out tacos, rice and refried beans, Kenny related some of his hospital experiences to Skip Aksland, who had just dropped in from Daytona. Japanese hospitals, according to Kenny, are nothing like those in America. He didn't spend his three weeks in a bed; it was, instead, a kind of hammock. "And you have to wash your own sheets," he said.

Everybody at the table was astounded, because Roberts was in no shape to do anything. The linen, food (patients are even responsible for preparing their own food) and other necessities were handled by Kenny's wife, Pat, Kel Carruthers and an interpreter supplied by Yamaha. Apparently, according to Japanese tradition, when you are placed in a hospital, you usually bring somebody to look after you. Kenny said that there are no nurses like the ones which fill western facilities. You can hire a nurse to take care of you, or bring in your family to stay with you, which is what most people do.

So, as Kenny Roberts lay in a Japanese hospital recovering from his injuries, wife Pat, Kel and the interpreter slept on cots in the same room for the duration. In addition to doing the laundry for her husband, Pat did the cooking in a little fireplace down the hall.

"How bad did you hurt?" asked Aksland.

"Pretty bad," replied Roberts. "They didn't want to give me pain shots cause they paralyze your stomach which means that you can't eat anything. You can't pass any gas or anything like that. The pain was real bad. A couple of times I went on a real trip, so I got them to give me shots. Those worked for a while until they wore off.

With your stomach paralyzed, you can't eat anything. One time I did, and in a couple of hours I found out that with your stomach paralyzed, there's only one place the gas can go. Believe me, you don't know how good it is when you can fart again."

MC Do you function pretty well now?

KR Yeah, they did a good job. I haven't taken a pain pill since I left the Japanese hospital. I'm really glad that I don't have any back pain as of yet. It's just compression of the 12th vertebra. When that heals, my back should be 100 percent.

MC There were a lot of stories about what you were testing out there. One had you riding the new four-stroke endurance bike.

KR I don't know how that got started. I was testing this year's 500cc four-cylinder. It's basically the bike I rode last year, just lighter and more power.

MC What other bikes were you testing?

KR That was it. I'm not an experimental rider. I don't test experimental equipment. I test proven motorcycles. When I get on a motorcycle from Japan, it's already been ridden quite a bit. The Japanese system is that they have test riders to test the new stuff. They have me to win the World Championship and they don't mix it, which is really a good idea.

MC This is your first accident serious enough to really hurt you, to put you in the hospital.

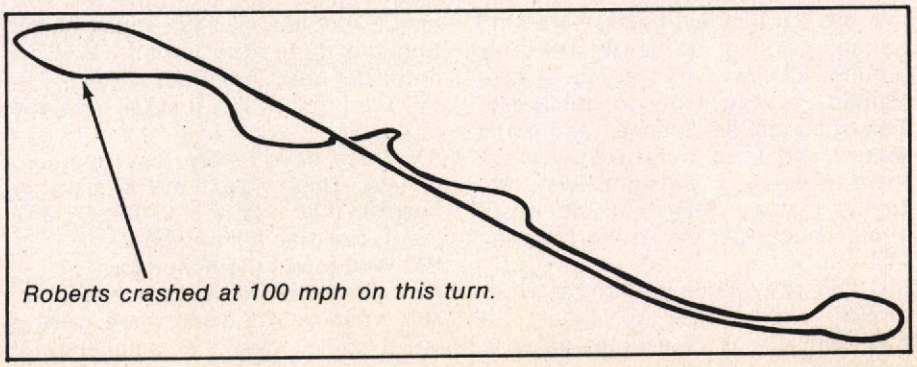
KR Yeah.

MC What has that done to you as far as your overall look upon your career—your life? How has this changed your attitude?

KR When you race like I do, you tend to get a little bit forgetful. You get a little bit too confident in what you're riding and you ignore little things that you shouldn't ignore. For example, I should have changed the front tire. Someone else had been practicing on that bike before me so the tire contour was not right. This is something you don't overlook when you're racing, but you might when you're just riding, especially when you don't realize that you could get hurt really bad. So it woke me up a little bit. Next time, I will probably say I want a new front tire on it before I ride it. I want the brakes fixed properly before I ride it. I've done a lot of testing where the brake was working 50 percent. You're out there risking your life. Nothing can be just good enough, it has to be 100 percent good, so fix it before you ride it. That's really the only thing that I can say that really changed. I'm gonna have to be a little more specific when I do my testing and get a little more aggressive when I go test instead of just taking it the way it is.

MC Do you want things more your own way?

KR I want things done 100 percent instead of 80 percent. Testing, to my way of thinking, has really opened my eyes. It's more dangerous than racing. So naturally I'm gonna want 100 percent from now on.



Roberts crashed at 100 mph on this turn.

43,000 mi.
10.97 e.t./123 mph

High performance, the story goes, is like playing Russian roulette with a submachine gun. The faster you go, the quicker you blow.

Well, the rat Z-bike above has 43,000 miles on the engine. It's seen almost daily use in heavy city traffic, a trip up through Canada and a long run through Oregon and Washington.

After all that, this bike is still capable of turning a 10.97 second e.t./123 mph quarter mile (stock Z-1's, brand new, do the quarter mile in 12.38 sec./110.29 mph).

Inside this 1132cc adrenaline machine is an R.C. 1132cc Big Bore Kit, R.C. cams and partial valve train, clutch, 29mm Smooth Bore Mikunis, CDI ignition, 4-into-1 exhaust system, welded crankshaft and a custom head porting job.

We recently pulled the head off for a check. Everything looked fine. Wear was negligible. So we put it back together for several thousand more miles.

In all 43,000 miles he's never had a problem. Not one! Cosmetically it's a rat bike. It gets washed when it rains. But, lubrication and adjustment guidelines are followed closely.

43,000 miles! The point? R.C. Big Bore Kits live.

We'd like to help you put together a performance package that's right for you. We make high performance and racing engine components and exhaust systems for the big fours. We also offer precision high performance machining and engine building.

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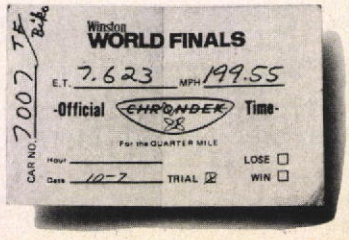

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Roberts Interview

MC How has this affected the rest of your life?

KR It hasn't, really. You think a lot in the hospital, but I couldn't wait to get out so I could get well. I've set my comeback date for the Austrian GP, the second event of the season, and if I'm anywhere close to 100 percent, I feel I'm going to do a better job than I did last year—except I want to be 100 percent. I don't want to come back at 70 percent because I can't beat everybody. I had trouble beating them at 100 percent sometimes. It hasn't really changed my idea about racing or my physical fitness program. I want to be in better shape. I guess I am going to have to do more exercises to get my back in shape. When I do, I'm not going to stop there, I'll just go a little farther.

MC How are you training yourself for the coming season?

KR Just right now it's in the mental stages. That's how I'm thinking about it. Whether I will go to Austria or not, I'm just going to wait till I'm ready 100 percent.

MC So you won't go there at any cost?

KR No. I'm going to have to draw the line where I'm going to try it. If I went and it hurt my back, I'd get off the bike and rest another week or so. I'd probably ride at least a couple of laps and see what's going on. If the doctors say there is no way I can make it, certainly I'm not going to think there is and ride anyway. This back problem, I don't want it all my life. I'm going to do just what they tell me to do. Mentally, I have an idea where I'm going to draw the line if it comes to that. Yamaha doesn't want me to come back unless I'm 100 percent, and I think Goodyear and all my other sponsors feel the same way because I have a lot of years left. I don't need to hurt my back permanently now. As far as getting in shape, I don't really know until I find out what I can do because right now I can't do anything.

MC Are you going to try trail bike riding?

KR No. I won't be on a motorcycle till Austria.

MC Do you think that may take the edge off?

KR I don't think so. Mentally is where you get your edge. I can develop the final skills of riding a motorcycle in the practice time I have because we have use of the track the week before the race. Any reactions and learning I have to do I can do in that length of time if my back isn't hurting. If that complicates it, then that's going to take the edge off. You can't give it your whole shot if something is holding you up, and you think that you may hurt yourself in the end. Physically, it's going to be tough to get in shape in the length of time that I have, because now I can't do anything: I can't run, I can't get my body where I really want it, so you know naturally that I'm not going to be 100 percent. I know the feeling that makes a bike go around the race track. I haven't lost touch with anything. It's just going to be getting my body back in shape and putting it back out on the race track.

MC Do you think you'll get a lot of specific pressure from other riders because you are the Champion coming back to defend your title?

KR I don't think so. The pressure will come from the one who wins Venezuela. If this guy is a consistent winner, like Sheene, then I am going to have to beat that person four or five times to get the points back. It will force me to have a different strategy. I don't want to have to do that, but I'm afraid I'm going to have to. There's going to be consistent placers. Suzuki has five factory riders. Any one of those guys could win it.

MC Essentially speaking, you're going to have to ride harder, right?

KR Yeah. I'm going to have to ride as hard as I did last year, which is pretty hard. I rode a lot harder last year in a couple of places than I really should have. A couple of times I didn't ride as hard as I should have, so I sort of made up for it.

MC I've heard that after you defeated Sheene last year he was considering going into cars, but when you got hurt, he decided to come on out and race again.

KR Well, I think that he was coming out racing again anyway. I think they wanted Sheene to make up his mind whether he was going to do motorcy-

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The KZ400 LTD. Billy goat bars (almost), fat rear tire, aluminum alloy wheels with a disc up front. Big step seat and a sinister black paint job with pinstriping. Oh, et tu, Brute?

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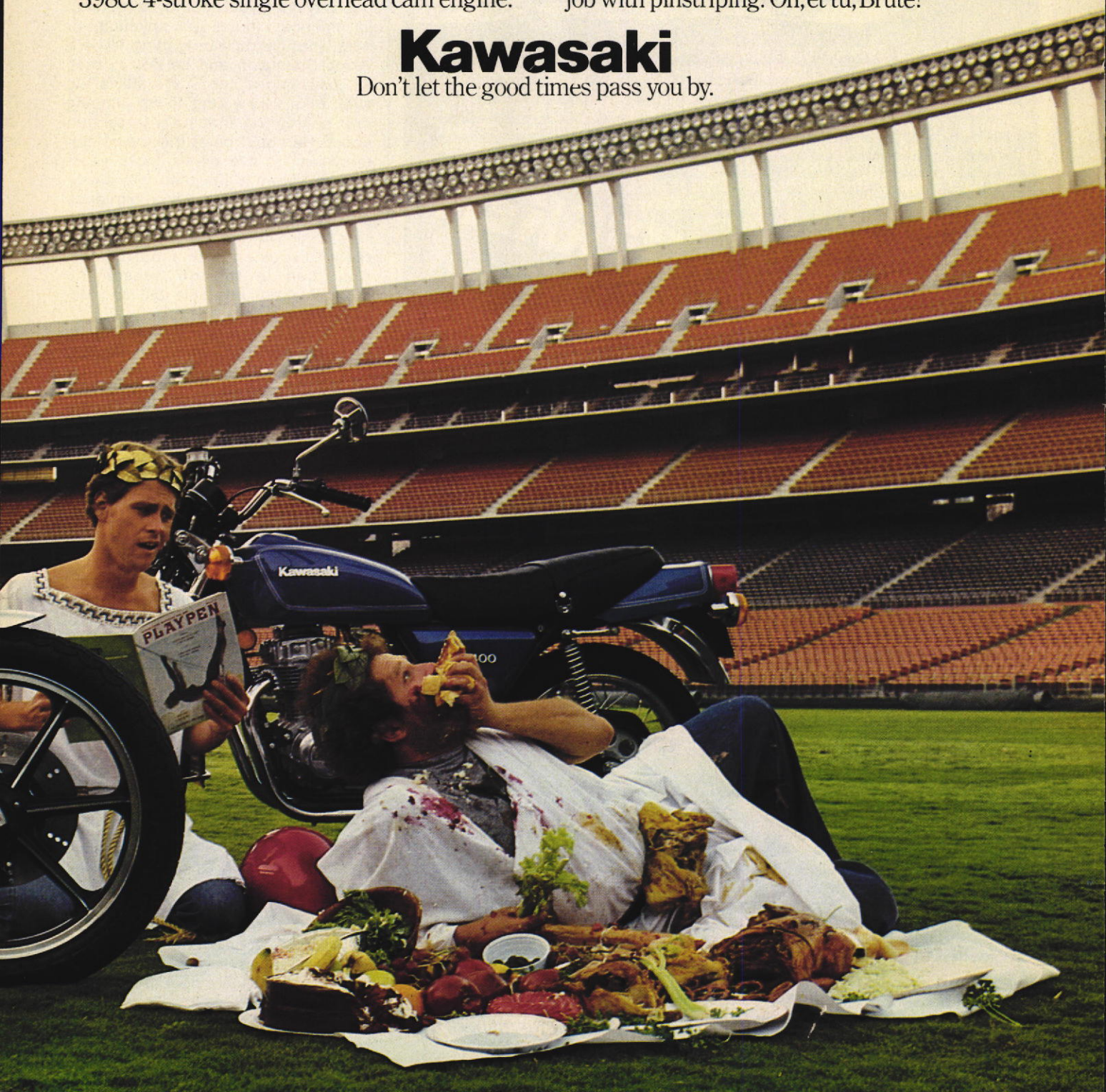

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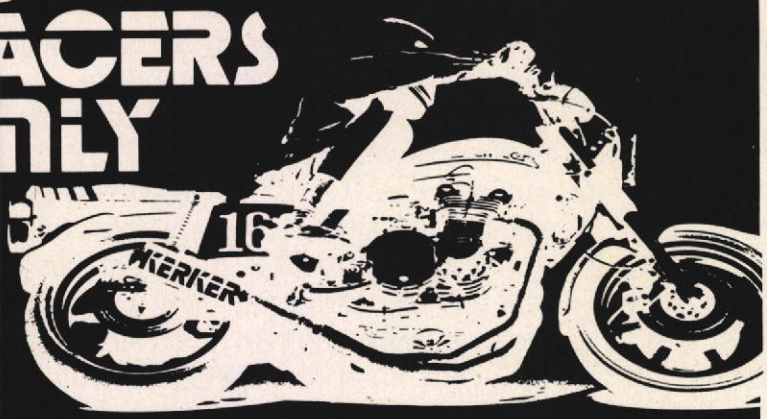

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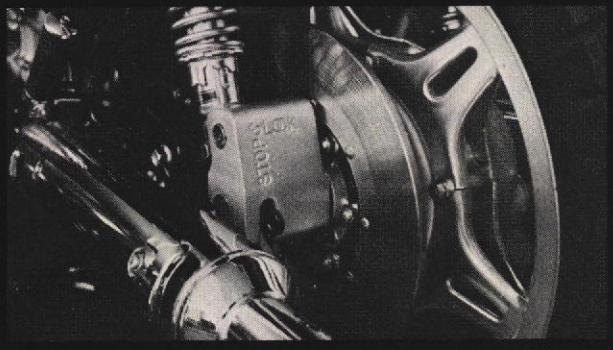

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cles full time and cars half, or bikes half and cars full time, so he had to make up his mind. I think that he will do the 500 GPs full time and do some car race events toward the end of the year, maybe. Cars are a big jump, even if he's got big sponsors and people behind him. But he's got England which is a hell of a lot better than being from the United States if you are going to be a racer, because you're important enough there to get on TV and get the kind of publicity that you should be getting. In America I don't get anything, or near what I should be getting to be a World Champion and he got all that. To jump into a car . . . it's still a big step. He's very young to be jumping into something that he's uncertain about. He could be at the top of motorcycles for five or six more years and he knows it. To jump into cars—where he's nothing—it's a big decision. I think he was leaning toward cars earlier in the year when he was really disgusted with motorcycles. And then in the off season he thought about it a little bit, and decided bikes aren't that bad.

MC Do you feel it may have been that you are down and out, injured, that may have encouraged him to go back to bikes? After all, he had it fairly easy before you came to Europe.

KR I don't think he'll ever have it so easy again, because now he's been beaten and everyone knows that he can be beaten, and now they know his faults. So I don't think he'll ever have it that easy again.

MC Sheene made a lot of money in Europe and I heard that your racing over there would put you well on your way to becoming a millionaire this year. Any truth to that?

KR A millionaire as far as making a million dollars in a year?

MC Making a million dollars.

KR Oh, I made over a million dollars since I've been racing. I'm starting on my second million.

MC Will this injury stop you from making it?

KR No, it hasn't done anything as far as contracts and sponsorships.

MC It cost you and your sponsors a bundle to win the Championship last year, right?

KR Well, with everybody's salary and expenses and everything it cost nearly $400,000, somewhere in there. We did it on a no money problem—we had a really big budget to work on so we never said well we can't afford this or we can't have that. We just

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PICK ENGINE

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in some areas. Mert Lawwill is interested in developing a chassis. Sammy Tanner will arrange to secure Ascot Park during the week for testing. Bruce Burness will help with suspension. Many AMA Experts have already volunteered to ride the prototypes, though Pick's employee, Matt James, who should earn his Expert license shortly, will handle most development riding.

If this seems like a lot of work to complete in ten months, realize that the parts on these pages were mere sketches in early April of last year. That's when Pick hired a long-time friend and ace machinist, Dick Holt, to make formal drawings and carve the pieces out of billet metal. Pick put him in a private room with a drafting table and a brand new Bridgeport mill, and quickly Holt transformed Pick's sketches and ideas into blueprints and hardware. Holt's background was also in design and machining of special equipment for top-fuel dragster engines. One of his first tasks on the motorcycle engine was to bolt down a 114-pound lump of steel on the mill and cut two crankshafts from the solid metal. It took him only three days. Holt was pumped about the project because he'd been in the stands at Ascot a few weeks before and overheard a fan say, "Harley-Davidsons can't be beat." "There ain't nothing that can't be beat," Holt says, "and we're going to prove it."

Another employee with a mechanical and dragracing background, Mike Chysyk, who has worked with Pick for 11 years, is handling final set-up and tuning of the engine. Chysyk and Matt James built the entire dyno especially for this project. Pick himself has spent about 50 percent of his time for the last year on the engine, and still runs a seven-man machine shop which handles Keith Black's engines, Ken Maely's speedway engines and a raft of oil tool and aerospace work. Cash flow from his business has completely financed the engine so far—to the tune of well over $100,000.

To look at Steve J. Pick you would never suspect that behind his usual two-or-three day beard and faded, greasy clothes is an employer, businessman, racer, designer, machinist, computer programmer and family man. He works 10 hours a day, seven days a week and hasn't had a vacation since 1968. His wife, a striking blond, and 18-year-old daughter both work at the S.J. Pick Machine Company in Paramount, California, an industrial suburb of Los Angeles. Steve is a rough hewn man who does everything to the maximum. "When I run a business, it makes good money. When I race, it's to win. And I don't drink just one beer, I drink enough to make it worthwhile." Pick quit smoking and drinking altogether last December 8, "because the engine interests me more," he explained.

Indeed, it is his obsession. Several times during our visit he walked over to the dyno and fired the motor briefly, "just to hear it run again." Other times while staring at the dyno and its support systems which feed the engine like a patient in intensive care, Pick said, sometimes quietly, and sometimes very loud, "Let's go racing. Let's go win."

Whether he will win depends on the chassis, the rider, AMA politics and Lady Luck. On the mile and half-mile Harley-Davidson would be a formidable foe for Jesus Christ and his 12 Apostles, let alone a man who has never built a dirt tracker before. Pick is the ultimate privateer looking to unseat the factory and steal its game. A lot of people will look at the man and say it can't be done, but those who know him will probably give you odds that it will. *M*

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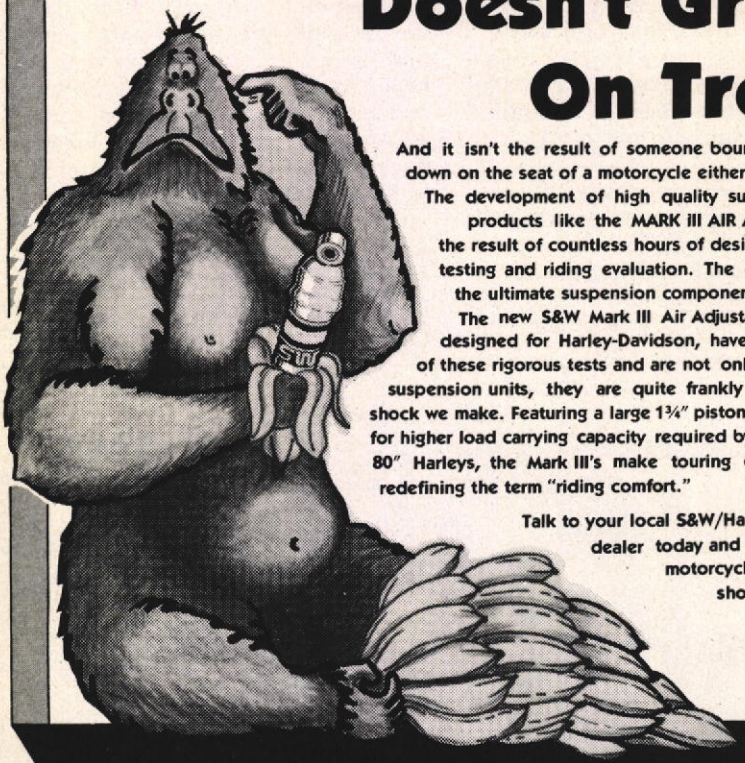

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KENNY ROBERTS INTERVIEW

continued from page 92

and we won the World Championship. We spent probably a little more money than we had to, but you know when you spend $300,000 and you don't win it, then you spend 350 and you do win it, it makes a lot of difference. I wasn't going to be put in a position with money a problem.

MC So cubic bucks helped you a lot.

KR Yeah, it was cubic dollars. Even if I had to use my own money—though it never happened—I was not going to have a money problem.

MC Wil Hartog, the Dutchman, was a big surprise to you when he came out of left field, wasn't he?

KR Yes.

MC Who are your toughest rivals in Europe?

KR Well Ferrari is going to be good. He's a pretty young kid and he works at it more than just about anybody in Europe, so if everything falls together for him he'll be tough. Cecotto is very consistent. He may not run good three or four races but then in the rest of them he is capable of running in the top five.

MC How about Sheene?

KR He can run in the top three every race.

MC How about Baker and Hennen?

KR Baker has no chance. He doesn't have a factory Suzuki. Baker is good enough to run with anybody except he doesn't have a factory bike. Hennen is good but Hennen won't be racing.

MC Because of the Isle of Man crash?

KR Yes. Hennen would be a major threat but he's not ready.

MC Who are the best roadracers in America?

KR I would say Skip and Baldwin and Mamola and Singleton are all coming up, and then you have Gene Romero and Dave Aldana who are steady and are capable of beating Europeans.

MC Will you race against any of them this year?

KR I'm going to race my 500 at the Sears Point National July 15 just to run with the 750s. I may not be as competitive, but America has never seen my 500 and they will there. I think the 500 is a better machine really and it shouldn't be at a big disadvantage.

MC What would you do if you stopped racing?

KR I would like to be in a position to just stop racing and do what I wanted to do.

MC Go out fishing?

KR Yeah, fishing and hunting and just go to the races and watch. I'm a

competitive racer but I have the race bug as a spectator too. It's interesting to me that even though I've been at it so long it hasn't become a big bore to go watch a sportsman race. As far as racing goes, it's just sort of in my blood I guess.

MC What do you think about yourself, who you are, the way you are?

KR It's sort of impossible to answer. I can sit here and tell you that I'm the best roadracer in the world and I wanted to do that ever since I was 14 which is a lie because I didn't even know that there was a World Championship when I was 14. I'm the World Champion because I won it last year. It doesn't make me the best in the world. It hasn't changed me in what I have been. It hasn't done anything for me except that I want to do it again. I wanted to race motorcycles when I was 14 and I did it. Then I started doing it for money. I wanted to make some money because after you do it for fun, it's also nice to buy a new car. Then a new car ends up being a new house, then a newer car, then a newer house and then two houses. I turned racing into a professional business and was lucky enough to be with Yamaha and good people in the industry—the best helmets and the best tires—the best people have always been with me. I treated them good and I think they have treated me good and it's important that they were the best. I haven't succeeded because I'm making a lot of money, it was because they are good people and we just found each other and that is what made my career and made Kenny Roberts. I'm still doing what I want to do. If I don't want to race motorcycles, I'm not going to race motorcycles. If I wanted to race cars I would have raced cars last year or this year. I'll stay in motorcycles as long as things keep going my way, for I have built myself to be the best I could be at what I do. That's what I strive for and try not to let politics get in my way. I'm sort of simple, I believe two and two is four, and if you say two and three is four, then go off and do your two and three. I won't let it get in my way. I did what I wanted in my career and I'm just glad I can do it with control. Like John Wayne, I saw him in a TV interview and they asked him what would he change about his life. He's had everything he wanted so why would he want anything changed? I have done everything I wanted to do in my career and there is nothing I would change. I wouldn't even take back one of those Harley-Davidsons that threw dirt all over me in Louisville, Kentucky. I wanted to race dirt at the time, and I wouldn't trade it for anything. *M*

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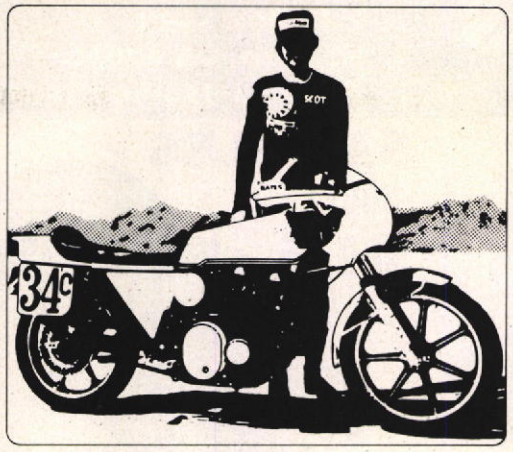

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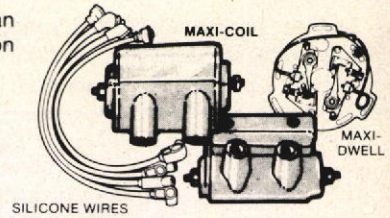

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MIKE BALDWIN'S DAYTONA
continued from page 61

repassed while sweeping into turn three, and Baldwin, a little down on power, had to wait him out and try to get by again in the backstraight chicane. As he told it after the race, "I got back by him, but you know if you pass somebody in the chicane they can draft you around onto the front straight and get by just at start/finish, and there's nothing in the world you can do about it." That's just what Mamola did, but Michael, having come from dead last to pass the leader on the last lap in such a short race, found it relatively easy to swallow any disappointment he might have felt at being tagged at the line.

Thursday, March 8

Thursday Michael made the mistake that almost cost him the weekend. Qualifying for the 750 class was that afternoon and practice for the 750s in the morning was getting to be serious business. If a faster way around the track was to be found, this was the time to find it. Baldwin has never been accused of being a timid rider—quite the contrary—and he has been criticized for the abandon with which he throws himself through groups of slower riders, often touching fairings and footpegs, leaving lesser riders surprised and floundering behind him. In practice Tuesday he had scared a couple of his friends by almost highsiding in the infield. He claimed he was just playing, that he had tried to get out of shape where he did—but there were those who weren't convinced. He couldn't "play" and still get 2:08s out of his slower Kawasaki. In turn four, a very long carousel right hander, Michael felt the rear wheel get away from him, corrected quickly in an effort to save it, and found himself tossed over the highside. He landed on his left shoulder and his left hand, going perhaps 80 miles an hour. He was in a great deal of pain, and the ambulance took him to the track field hospital where the preliminary diagnosis was that he had broken his left clavicle. Quickly he was taken to the nearest full-service hospital.

When Dennis David, the Kawasaki team manager, got to the hospital Michael looked pretty bad. He was stretched out flat, very pale, obviously hurting badly. The final diagnosis, after X-rays had been taken, was that there was no break in the collarbone and no breaks in the wrist—but obvious and massive

bruising of the hand and shoulder. Team Kawasaki had Michael moved from the first to the second Superbike heat race in the off-chance he could come back and race for a good starting position in the Superbike final on Friday. Michael would have to put in at least one lap on the KZ1000, just to get himself on the grid for the race the next day.

The team rushed back, Mike still in his leathers, just as his heat race was flagged off. The bike was hurriedly readied. Michael, his helmet on, his tinted face shield taped down, sat slumped in a chair at the mouth of the garage, holding his left hand in his right, looking like some dying being from another planet. The KZ was wheeled out, Michael was carefully helped on and he rode down the pit road and into the race. One lap was all he could manage, and he pulled into the pits and rode right into the paddock, team members running frantically ahead of him as he was pushed, engine off, through the crowd and over the banners guarding the garage, right into the building. The garage door slammed down instantly, and reporters and photographers were firmly asked to leave. Not even Mike's roommate could make it through the frenzied Team Kawasaki personnel. Mike's face was bright red, his eyes wide and shocking white in contrast. He held his left arm limply as team members and a doctor familiar with roadracing injuries eased his leathers off. The doctor checked the bruises and advised Michael on how to take care of himself, and Michael was helped into his street clothes.

Now he faced his first major factory team relations problem: how to tell your manager that you've just thrown their one and only very expensive 750 down the track and maybe bounced the team out of a very important race. Now that it was known that Michael would be OK, the team clustered around as he related the story. The rear end had come around so quickly and so unexpectedly that he first thought gasoline somehow had gotten to his rear Goodyear. However no gasoline stains were found on the bike. The tank hadn't leaked even after

continued on page 99

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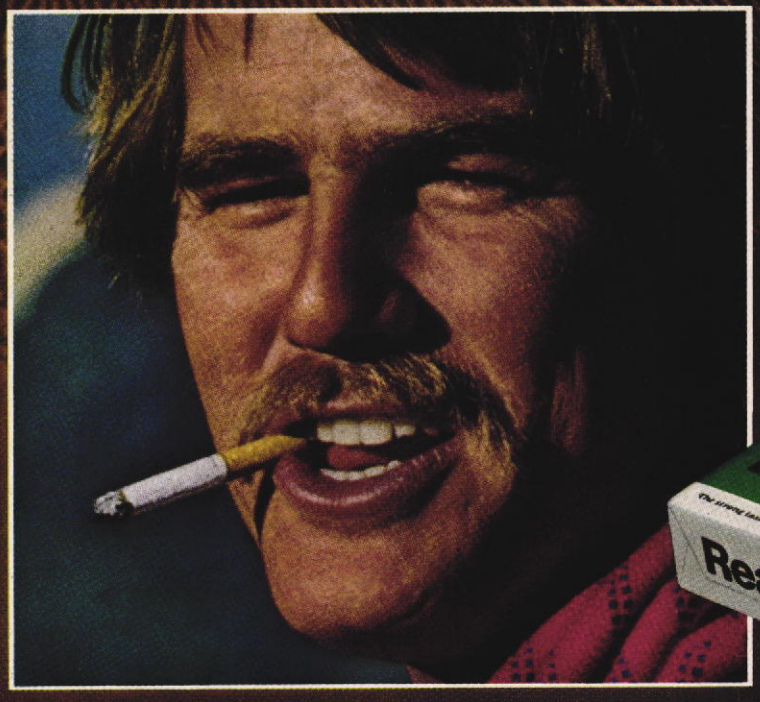

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MIKE BALDWIN'S DAYTONA
continued from page 97

the crash, even though a corner of it had been ground down significantly by pavement as the bike slid. The meeting broke up, with much adrenalin going to waste in the confined quarters. Dennis David and Michael started off for more X-rays, Michael's left arm in a sling.

Friday, March 9

Rumors about Baldwin's condition flew through the pits all day Friday. The general consensus was that Michael *had* broken both his wrist and his collarbone and that he would be doing no more racing that weekend. The big dark metallic green KZ1000s stayed in the garage as Ron Pierce was out winning the Superbike race on a Yoshimura Suzuki—and, for the most part, so did Michael.

In the afternoon, his arm out of the sling and his hand trussed in an ace bandage, he held court in front of the working space of a friend and long-time competitor, Rich Schlacter, talking about some of the tricks he'd learned about Daytona from the extensive tire testing he'd done there before the race, and from talks with Gary Nixon.

"The whole key to the track is where you are, where you're placed in a few corners. You can screw up every corner in the infield and *still* not run slow, not run worse than sixes (2:06.9 or faster) if you get the chicane and turn five right. You've *got* to come out of the chicane with the throttle pegged and you've *got* to come out of turn five with the throttle pegged.

"The key to five," (a tight left hander that exits wide out onto the banking with a vicious bump where the concrete infield joins the asphalt of the banking) "is to go in wide and late. You know those little reflector dots and that strip of black tar way outside at the entrance?" he asks Schlacter, his eyebrows up, now playing off the attention of the knot of people clustered around him. "You *must* go between them, and if you do you'll find yourself straight up and down when you hit the divider strip and you can keep it wide open all the way up onto the banking."

"Going in to one," (a tight left with a deceptively wide entrance, entered under maximum braking from the speed of the start/finish straight) "off the banks, just like in the chicane, you've got to be up by the wall." *continued on page 100*

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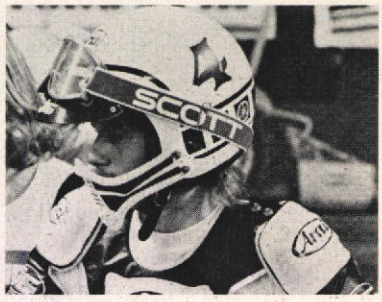
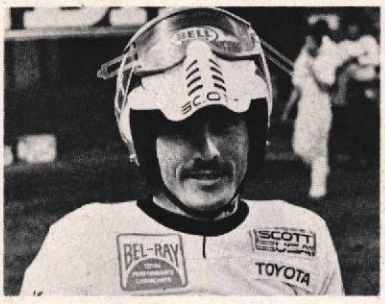
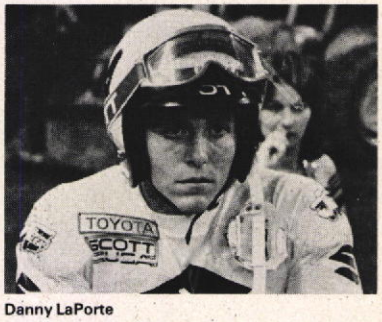
Bob Hannah



Rick Burgett

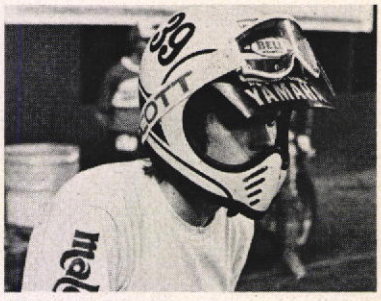


Gaylon Mosier



Danny LaPorte

Gary Semics



Mike Bell

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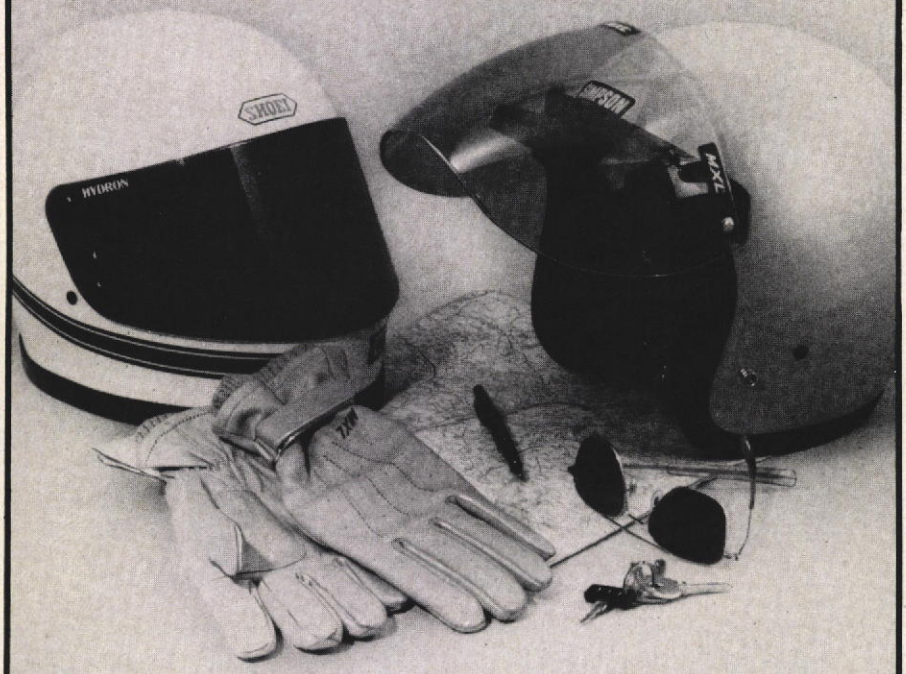

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MIKE BALDWIN'S DAYTONA
continued from page 99

Schlacter interjects, "Yeah, I know. You've got to do your turning going into the corners—I still wind up going into one low and tight, then drifting to the outside and coming back in for the late apex to come out with the bike straight up."

Baldwin shakes his head. "No, you've got to come in wide." He holds his limp arm with the good one. If it hurts him, he shows no sign of it. "In the chicane you can't do it like Romero does. He goes in too fast, then he's got to (whoa) flip it this way and (whoa) flip it that way at the last second, and he comes out all screwed up," says Baldwin, flipping his head back and forth, acting out Romero's moves.

Harry Cone comes revving through the alley between two trucks where Baldwin has been bringing the mortals a taste of what the world looks like through the eyes of Baker, Sheene, Roberts and, of late, himself—and the group breaks up to let Cone's TZ750 through the narrow space. When they look back to Baldwin to hear some more—he's gone.

Saturday, March 10

To much surprise in the pits, Baldwin tries to race in the 250 expert final. His shoulders are reinforced with a foam and nylon strap brace under his T shirt. Rumors still abound that Mike is carrying cracked bones around with him, but he denies it, saying he just has only a bruised shoulder and wrist to contend with. Baldwin's good starting position on the grid is negated by another horrible start. Unless the KR250 is very, very well warmed-up it has no powerband at all to speak of, and Michael, contending with a super peaky engine with his sore left hand, burns out the clutch on the line. He makes one lap to see if the clutch will cool down and stop slipping, but it's no use. Aksland and Freddie Spencer run the race nose-to-tail and Aksland barely stays ahead at the finish line.

As dusk settles over the speedway the Kawasaki roadrace team is busy in front of their garage practicing gas stops for tomorrow's 200 with the 750, now rebuilt, Michael, in his street clothes and helmet, astride it. One of the crew holds the door from the garage's toilet out in front of Mike as a stop board. It has a large "43" drawn on it in magic marker. Mike is to stop exactly against the board, then a vent hose

is popped into the top of the bike's tank, the fuel hose is shoved into the inlet on the left side and in about five seconds the bike is fueled and being pushed away.

Mike is serious, alert and professional about the procedure until Jim Weinert, high on ego and champagne from his victory over Bob Hannah in the motocross that afternoon, rolls up in his rent-a-car. Weinert looks lit, a red-faced bloodhound with poached egg eyes and a huge Stetson. The whole roadracing team whoops and cheers Weinert, who stays and clowns with them as they practice the stops. As the team splits up for dinner, Kawasaki roadrace manager Randy Hall announces, "Mike, I want to get together with you and have a talk about tomorrow, I'll stop by your hotel room later tonight and then I've got to get some sleep."

Mike replies, "I'd like to get some of that myself. Maybe I'll just stop off and get a six pack on the way home." To the suddenly upturned faces around him, he just laughs.

As he leaves the garage, Mike reaches up with his right hand to get something off a shelf, his left hand still hanging, seemingly lifeless. He takes a bottle of Excedrin and snakes it around his back with his right, stuffing it into his left back pocket.

Sunday, March 11

The rain started about six in the morning and by nine showed no signs of letting up, though the weather forecast predicted clear skies by noon. Inside the Kawasaki garage Michael waited, his shoulder brace showing through the Mario Andretti World Champion T-shirt he wore. At 9:30 Mike heads off to the doctor for a final check of his injuries before the race. On his return, raised eyebrows and questions, "How did it go, Mike?" greet him through the door. He responds vaguely, though positively, with a quick OK gesture and disappears into the bathroom. As the rain pours, the crew just waits. Everything that can be done with the bikes has been done. Mike stays on his feet, not quite pacing, but not quite standing still either. Finally, the sky begins to lighten. Relieved, Michael peers out a window and says to nobody in particular, "Maybe we'll get lucky. Maybe we can get this thing over with today."

In practice Mike turns the same times he was turning before the crash, consistent 2:08s. As he comes in at the end of practice,

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SPORT

Supercross Series: Hannah Blows One Then Takes A Pair

By Jim Gianatsis

It seems that only when Bob Hannah doesn't win is there something interesting to talk about in American motocross. When the "Hurricane" failed to win the prestigious Daytona Supercross, round No. 4 of this year's $500,000 AMA/Toyota Supercross which the Team Yamaha factory rider is well on his way towards clinching for the third straight year, that was newsworthy.

"It was my stupid mistake," related Bob afterwards back in the pits. "I read the lap board wrong. I was getting a glare (from the low lying Florida winter sun), and I thought it said I was 10 seconds ahead. It said '1P' (first place), but I thought it said '10.' So when I saw the front wheel come in, I thought it was a lapper playing games. But then he passed, I looked at the jersey and it said 'Weinert'!"

Team Kawasaki's "Jammer" and 28-year old veteran stuffed his way past Hannah on the last lap of the 12-lap feature race of the biggest spectator event in motocross. By the time Bob had realized what had happened it was too late. Jimmy Weinert held off Hannah for the remaining ½-lap to the checkered flag.

Weinert's performance was certainly the most outstanding of the race as he pulled his lime green machine off the starting line in ninth position and had to play catch-up the entire moto. Team Honda riders Gary Semics and Warren Reid had roosted away with the start ahead of Hannah, Can-Am's Greg Robertson, Marty Tripes with his Honda, Suzuki's new star Darrell Shultz and then Weinert. Warren Reid bailed off his exotic new twin downtube frame RC works Honda soon after the start, allowing Honda teammate Semics to run with the lead for just over six laps of the long Daytona man-made course. Rather than an expected challenge from Hannah for the lead, though, it was rookie Shultz who stuffed his RH Suzuki past Hannah, then a suprised Semics to take control of the race for half a lap. Darrell then clipped a haybale and spilled, recovering back in fifth place behind Weinert who was now running fourth. Next it was Marty Tripes who went pushing his way past Hannah, knocked on Semics' rear fender for three laps in a chase scene which drove the spectators wild before Marty finally got around Gary and into the lead. But then Hannah wicked up the throttle of his OW40 Yamaha to pass Semics, then Tripes, with only three laps left.

Bob was finally out front where everyone expected him to be. He kept looking back to keep tabs on arch rival Tripes, but never even saw Weinert charging up from behind as they threaded their way through traffic towards the final lap. As Semics faded back, Weinert blasted by Tripes to take second place and then close up the remaining distance to Hannah with half a lap to go. Never even seeing Weinert moving on him amid the lapped riders, Bob failed to put up a fight as Jimmy stuffed himself under the Hurricane in a turn to snatch victory from a surprised Hannah. Those trailing these two were Tripes, Shultz, LaPorte, Semics, Mosier, Burgett, Smith and Reid.

While Daytona provided as much excitement as anyone could ask for, race No. 5 of the AMA/Toyota Supercross series inside the Houston Astrodome the following weekend in Texas proved to be no race at all. In two nights of racing under the 'Dome Bob Hannah showed how to put 60,000 people asleep as he led every lap of his qualifying motos and then backed up his opening evening performances by leading every lap of the two 20-lap feature events. By the end of the weekend Bob had amassed a big enough points lead with the series hardly halfway completed that his third consecutive Championship is almost a foregone conclusion.

The riders who should have been expected to make Hannah work for a living, Marty Tripes along with Daytona and Oakland Coliseum Supercross winner Jimmy Weinert, suffered

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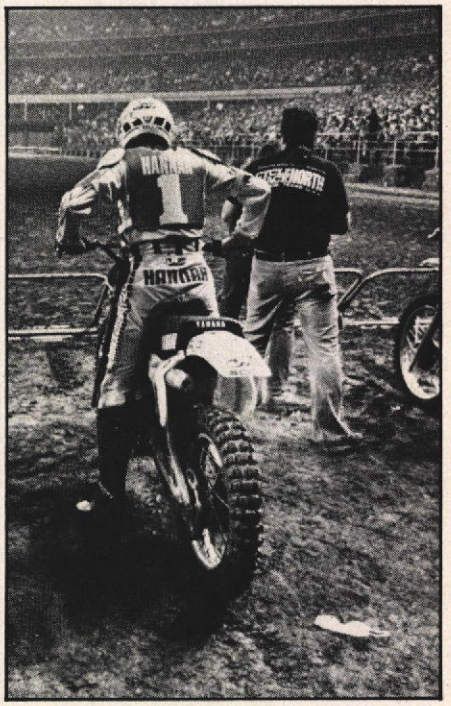
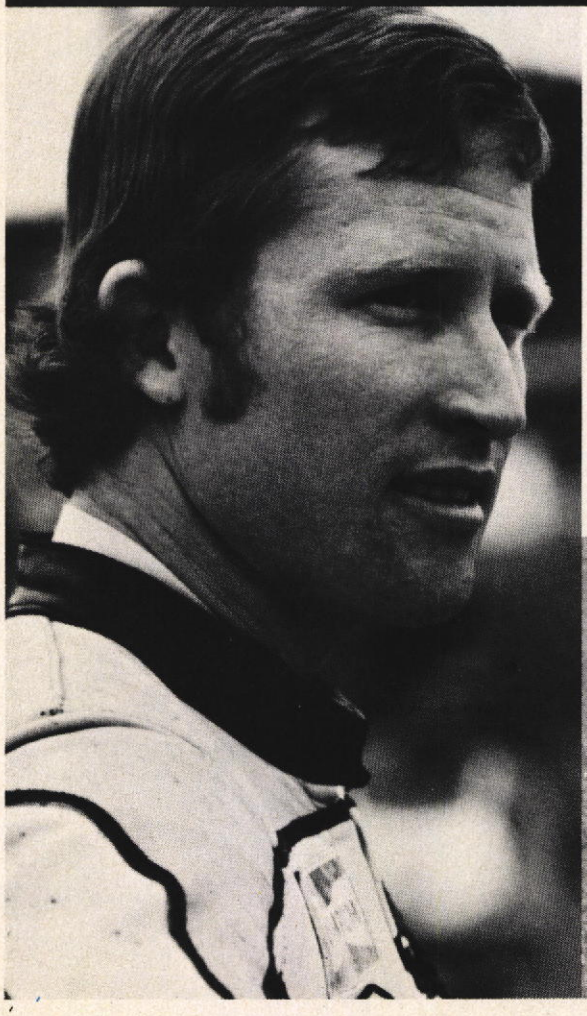


In the Astrodome Hannah lined up next to the gate operator. Watching him twitch rather than the gate gave Hannah lightning-fast starts.

Hannah and Semics shared the Daytona holeshot. Closest to the camera is Jim Weinert (21), who stormed by Hannah on the last lap to steal the victory.

PHOTOGRAPHY ART FRIEDMAN, JIM GIANATSIS, JIM ENYEART



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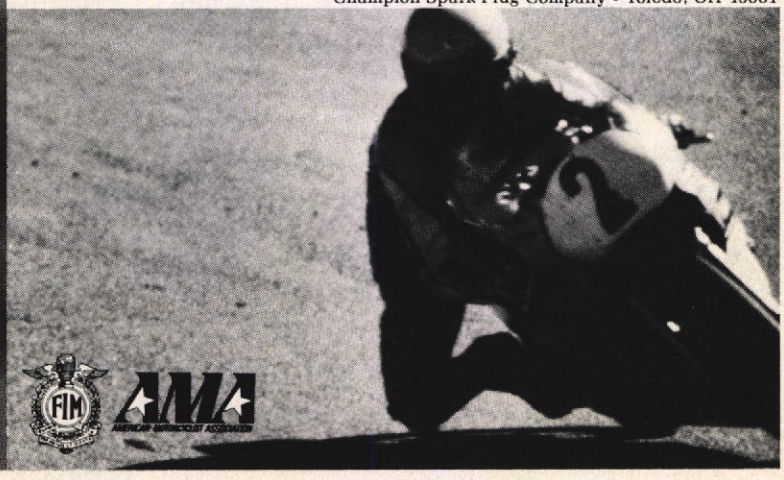

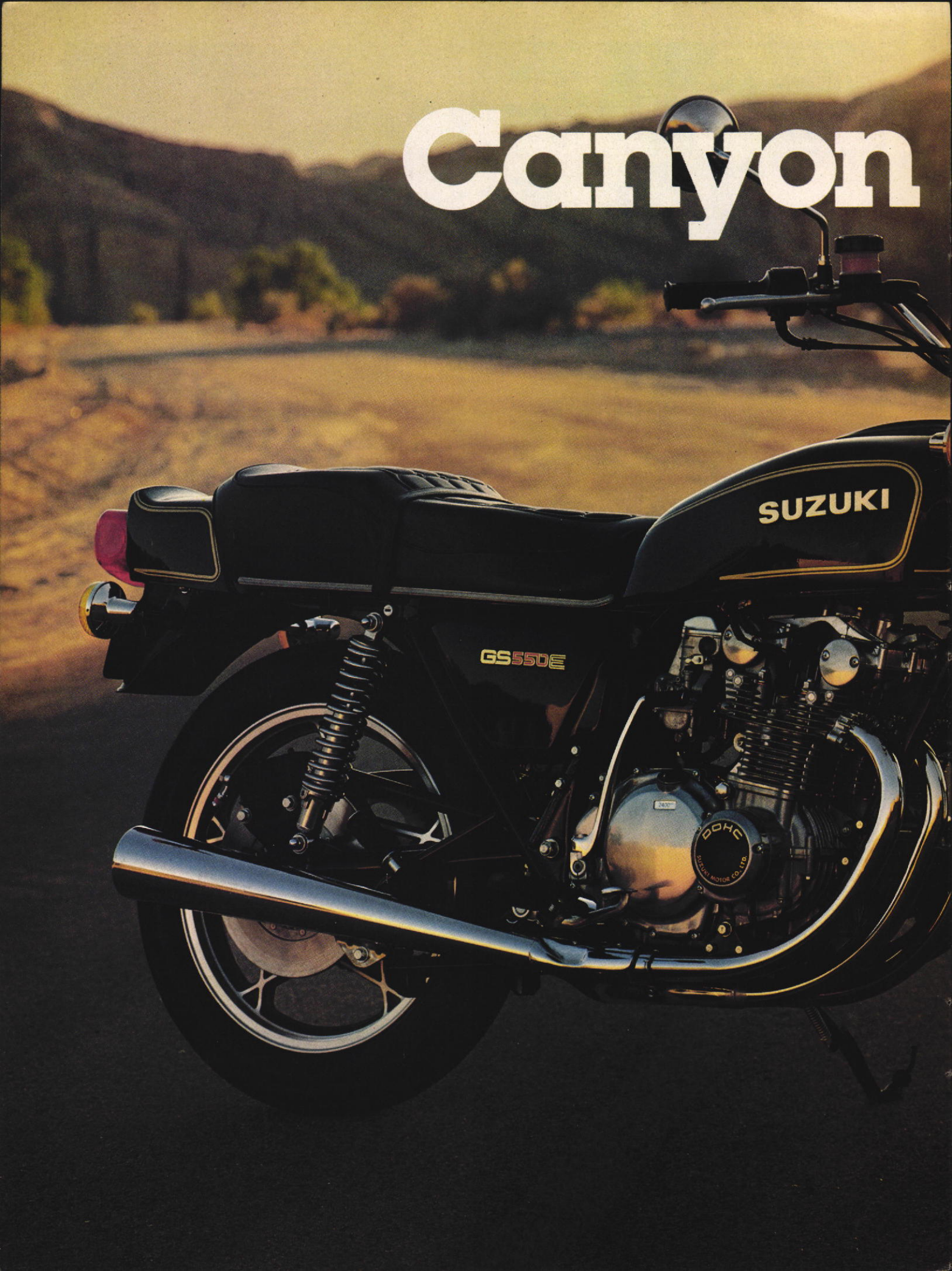
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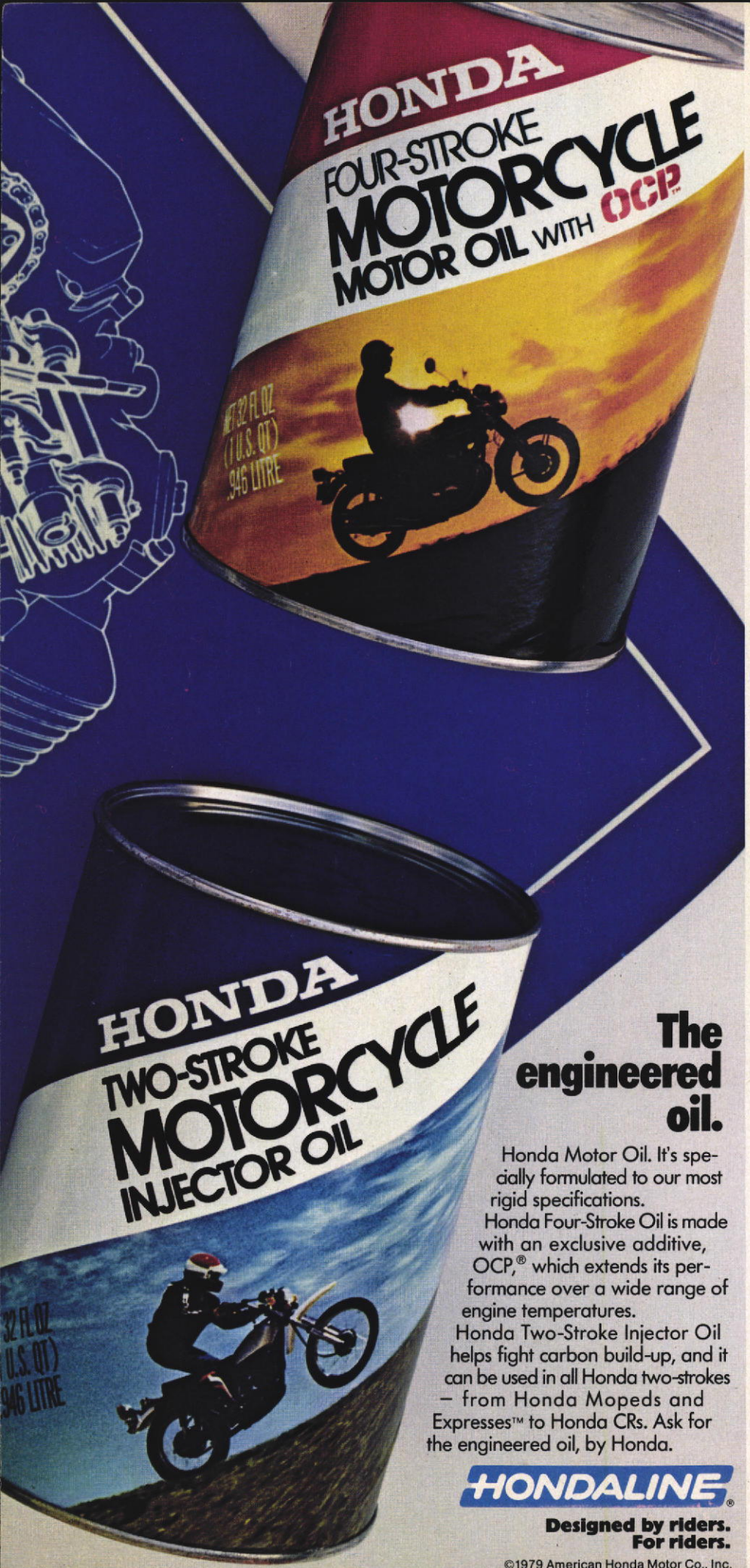

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SPORT

Supercross Series

from mediocre performances both nights on a track which hardly could be classified as challenging. Instead, the only pressure which Hannah might have felt came from local Texas star and Honda factory rider Steve Wise. Like Bob, Steve had burned up the track in his qualifying motos both nights and had the crowd looking for a showdown in the feature events. Friday night saw Steve getting a mediocre eighth place start and having to work his way slowly to the front of the pack as Hannah disappeared with the lead. By the time Steve reached second place and set his sights on Bob for the lead the race was over.

The following night, Saturday, Steve got a much better start in third place this time and soon was up to second behind Hannah. For the entire race Steve chased Bob from never more than 80 feet behind, but not much closer as Bob seemed capable of going just as fast as necessary to keep Wise a safe distance behind. The only thing which added a little interest to the evening was when Mike Bell, who had taken his factory Yamaha to a distant third behind Hannah and Wise the evening be-

Isle Of Man TT May Be Televised

By D.J.K. Wilkinson

ABC is presently scheduled to broadcast the Isle of Man Formula One TT live in America via satellite. The projected worldwide viewing audience of the early June event is 150 million, so lucrative TV rights have made Island Speedweek the world's richest series with prize money totaling $200,000.

Consequently the power struggle between Suzuki and Honda continues to escalate as both factories hope a win in Formula One (roughly equivalent to Superbike Production) will sell street bikes. Following Suzuki's announcement that they are to field at least three works GS1000s and several privateer entries, Honda is going flat out to increase their chances of victory. Leading the offi-

fore, charged his way up to try and catch the leaders again. The last three laps of the race saw "Daddy Longlegs" Bell cutting some two seconds per lap off the leader's times and come just six inches short of passing Wise at the finish line for second place.

On Friday Hannah was followed by Wise, Bell, Reid and Tripes. On Saturday it was Wise and Bell again behind Hannah, then Mosier and Tripes behind them.

Kent Howerton tries to hold off Mike Bell, who placed third both nights at Houston on his factory 250 Yamaha. Howerton eventually finished in 12th.

Supercross Points After Houston

1. Bob Hannah	Yam	179
2. Jim Weinert	Kaw	121
3. Steve Wise	Hon	106
4. Mike Bell	Yam	104
5. Marty Tripes	Hon	95
6. Danny LaPorte	Suz	88
7. Marty Smith	Hon	86
8. Darrell Shultz	Suz	81
8. Gary Semics	Hon	81
8. Warren Reid	Hon	81

cial Honda team will be Mick Grant, holder of the absolute lap record at the Island at 114.33 mph, which he set on a Kawasaki two-stroke racer. He will be joined by Ron Haslam who gave spectators some heart-stopping moments last year during a spectacular crash at Ballaugh Bridge. They will be using motors based on the CB900 FZ fitted with special factory parts and housed in frames made by the London firm of Peckett and McNab, whose private entry Kawasaki won the Formula One British championship last year against the works Hondas.

Unofficially we can reveal exclusively that Honda is also helping two other British riders with motors, spares and technical assistance. The first is John Cowie, holder of the British championship Formula One title and the rider who did more than anyone to put Peckett and McNab into the limelight. John also gave the

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Road Test Index

MAY 1979
125 MX Shootout
- Honda CR125
- Kawasaki KX125
- Suzuki RM125
- Yamaha YZ125

Can-Am 175 Qualifier
Kawasaki KZ1000 Mk. II
APRIL 1979
Dual-Purpose Hondas:
- XL185, XL250S, XL500S

Husqvarna 390WR
Yamaha RD400 Daytona Special
MARCH 1979
Honda CB750F Super Sport
Suzuki RM250N
Suzuki GS850
FEBRUARY 1979
Honda XR185 vs. Yamaha IT175
Kawasaki KZ1300 Six
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JANUARY 1979
Honda CB650 Four
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Kawasaki KX 80
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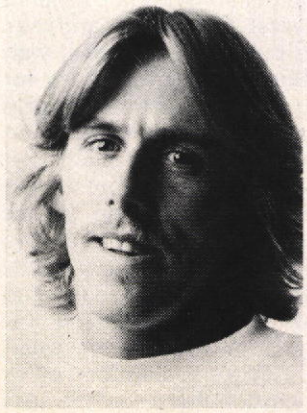

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SPORT

Isle Of Man TT

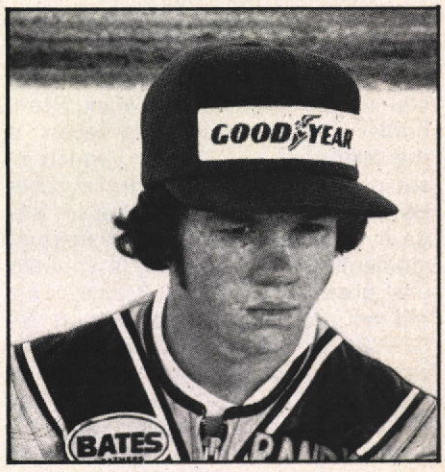
European endurance racing scene a real shake-up when he used the same machine to beat several established continental works teams. The other rider to receive this special help is Charlie Williams, who was runner-up in the Coup d' Endurance for two years. Formally an official Honda Endurance rider, he was left rideless when Honda dropped their participation in the event this year. Charlie has just been signed up by Bel-Ray in a sponsorship deal.

Anyone wanting to up-rate their own 900 FZ can purchase kits through dealers, if they can afford them! There are three kits available, Kit B (there is no kit A?) comprises a cylinder re-bore and new liners to take the motor up to 1000cc, conrods, pistons, crankshaft, camshafts, bearings, tensioners, sprockets, ignition system, exhaust, muffler and tachometer. Cost: $3000 plus 8 percent tax. Kit C includes the contents of Kit B plus a dry-sump conversion and high pressure oil pump, (incidentally, if the TT is televised the high-pitched whistling noise that the Hondas make is produced by the oil pump and can be easily heard over the exhaust noise). This kit costs an extra $1300 plus tax. Kit D includes all the above plus a close ratio transmission and dry clutch and costs a further $1842 plus tax. Since there are at least five of the D kits on order already by privateer riders, the TT should prove to be some event.

Trans-AMA Series Gets A Facelift

The AMA's director of professional racing, Mike DePrete, has announced that major changes are in the works for this fall's Trans-AMA series which remains the most popular outdoor motocross series in America despite the lack of European riders who once dominated it. The name of the Trans-AMA series itself will be changed since the name conflicts with a similarly named series run by the Sports Car Club of America. The loss of two tracks will also cause the series to be shortened to just five races. Major revisions under consideration include the possibility that riders will be allowed to ride any displacement machine they wish, 125cc, 250cc or Open. Also, that within the series itself there will be a team of five American riders selected to compete in points against five top European riders who will be invited to compete in the series with all their traveling expenses paid.

Mamola To Ride 250 World GPs



Randy Mamola, 19-year old whiz kid from Northern California and former "pupil" of Kenny Roberts, will be spending the 1979 season based in Italy to chase the 250 World Roadracing Championship. Pan-Am pilot Jim Doyle, who sponsored Kenny Roberts during his early years in motorcycle competition, began helping Mamola several years ago and has managed to put together a deal with the Italian Bimota frame company for Randy to contest the championship on Yamaha-powered Bimota-framed race machines.

But what's even more interesting is that Adriatica, Spa., a large tractor manufacturer in Italy, is well into the development of a horizontal twin-cylinder rotary-valve two-stroke. The engine reportedly resembles the Kawasaki inline twin 250 but the cylinders are placed one atop the other with the cylinder head facing forward. Bimota has constructed a frame for the Adriatica-built engine and a complete machine will be taken to all the GPs in addition to Randy's Yamaha which will be used in the event the Adriatica isn't competitive.

With Randy Mamola and Mike Baldwin scheduled for many appearances in Europe this year, it may not be long before we see another American World Roadracing Champion. M

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As usual there will be no general camping at the track but there will be a very limited number of motorhomes allowed to park at the circuit overnight. This is limited to motorhomes only and must be applied for in advance. Obtain information from Grand Prix Motocross Inc. (address above)

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MIKE BALDWIN'S DAYTONA
continued from page 101

with a half hour before starting time, a check of the plugs shows one cylinder with a possible leaking head gasket. Wrenches fly and Jeff Shetler, Martin Carney and Randy Hall tear into the motor like men possessed. Mike felt the bike bogging slightly exiting one particular turn and wants to drop the gearing a half a countershaft tooth to let the engine rev more freely. After 20 minutes, with Mike looking on anxiously, the bike is buttoned up and proclaimed ready to run.

Because he hadn't run any qualifying laps before his crash Mike is assigned the last starting position, 74th, on a grid that seems to stretch for a quarter-mile. As if that wasn't enough of a handicap, the grid is released in three waves to avoid first lap crashes. He will be 24 seconds behind the leaders before his race is even started. At 2:15 the first wave is flagged off, and Aksland, Singleton and Romero blast off from the first row. Baldwin holeshots the entire third wave and banks into turn one way ahead of his start mates, trying to keep the leaders in sight.

Dale Singleton leads the race on the first lap and Mike Baldwin is now 40th, about 27 seconds behind him. Baldwin is gliding through traffic like a downhill skier through slalom gates, passing riders before they are even aware he's behind them. He comes around for the second lap in 38th having passed 46 riders in two laps. Singleton is turning consistent 2:08.7 laps, and so is Baldwin. Even though Mike is clawing his way through traffic, he is keeping the gap at least even—on a slower machine. On the eighth lap Baldwin comes around in 14th, still passing people two and three at a time in the infield, only to lose back positions out on the banking.

By the 11th lap Michael is 9th, and moving up on his friend Rich Schlacter, running 7th. Mike's brother, standing on the pit wall, says, "Watch him come up on Schlacter, those two love to race with each other, and that bike of Schlacter's is no joke, either." Rivalry notwithstanding, Michael passes Schlacter, who we later find out has a leaking rear tire, on the 13th lap, and goes after Miles Baldwin, no relation, who happens to be riding Mike's last year's TZ. He catches and passes on the 15th. On the 16th lap, one lap early, Michael comes in for the first of two fuel stops. The fuel is pumped in less than four seconds, but the tuner, Jeff Shetler, tells the board man not to move out of Mike's way until he can check the chain. Michael starts waving his head frantically, motioning for the board man to get away, and he does, intimidated by Baldwin's intensity. The chain was fine, but the board holder is shaken.

Mike's number, 43, first shows up on the scoring tower on lap 18, listed in fifth, behind Singleton, Aldana, Ron Pierce and Patrick Pons. Mike is slowly making up time on Pons, but the gap is a long one, 18 seconds. To pass Michael will have to find some more speed somewhere. By lap 32, with Aldana and Singleton trading the lead like a hot potato, Baldwin, under a lightening fuel load, is bringing his times down under 2:08 on some laps and is definitely gaining ground on Pons. The last gas stop occurs on schedule at 34 laps and it is flawless. Four seconds. The bike is perfect.

On lap 42, with ten laps to go, Aldana gets the bit between his teeth and decides to make a serious run at Singleton. Singleton replies in kind and repasses Aldana to lead the next lap. Aldana passes once more, putting a risky and very beautiful inside move on Singleton as they brake from 170 mph on the front straight and dive into turn one side by side. And then, perfectly timed for the maximum possible heartbreak, Aldana breaks a rod at the start/finish line and coasts, waving a fist in anguished defeat into turn one.

With four laps to go it becomes clear that Mike might be able to steal third if Patrick Pons slows the slightest bit, either in cutting through traffic or to preserve his bike for the finish. Michael is steadily gaining ground. Martin Carney, the tuner for the 250, wishes out loud from the pit wall, "Oh, if only we had some horsepower."

But it's not to be. Pons maintains his pace—and Baldwin, after a near flawless race, comes in fourth behind Singleton, Pierce and Pons.

In the garage after the race, Michael is flushed and happy, well satisfied with his day's ride. Streams of the more knowledgeable fans gather to congratulate him for they realize the kind of job he has done, even if fourth never even got him to the victory circle. He sucked on a 7-Up as he moved around the room telling the story of his race.

"I was looking at the lap board up on the tower, I could see it

continued on page 112

What made Dave 'Four-Stroke' Reiner say, "What rocks?"

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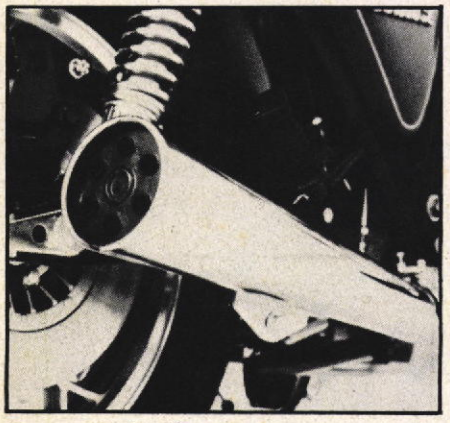

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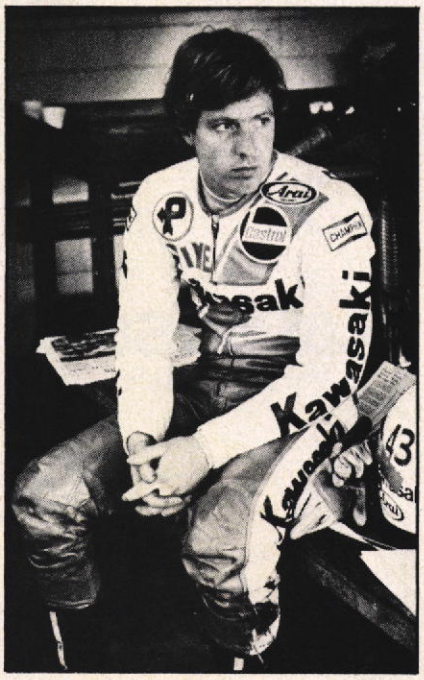
MIKE BALDWIN'S DAYTONA

continued from page 110

when I came down the front straight. I'd only look to see what lap it was because I knew if I looked at the position board and saw myself in the top five, I'd go crazy. My arm didn't hurt too bad. I had to keep my wrist up or it'd hurt under braking when my weight



would shift forward, but other than that it wasn't much. Oh, but I got detuned there for a while. At the beginning I'd be going into turn one and I'd see the leaders coming out of turn two. Then I ran into all these guys to pass . . . . The bike worked just great. I wouldn't have been able to pass people like I did in the infield if I hadn't dropped the gearing. Man, I was drafting people on the banks every chance I got, then I'd get by in the infield and go for the next guy."

As the crowd in the garage subsides, a wild-eyed man in a silver jacket comes in and congratulates Mike on his ride. "How did you fall down in practice, man?" he asks.

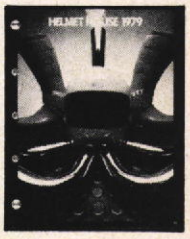
"Oh, I guess I didn't give the tire time to get up to temperature before I started to get on it."

"Well, we were rootin' for you . . . the cripple on the triple."

Baldwin sits down on a handy KZ1000. "I sure missed starting on the first row—ahh, I guess that'll teach me to go fallin' on my ass. I suppose it serves me right." He's lost in thought for a second, then repeats, more to himself than to anyone around him. "Man, fallin' down in practice." *M*

Catalogs

HALLMAN RACING has a new 1979 catalog that's loaded with the widest selection of off-road accessories yet. A newly developed line of protective gear includes nylon pants, boots, socks, gloves and other competition-proven apparel. The catalog also lists professional equipment like Sun Rims, Trelleborg tires, shocks, chains and even the awesome 500cc Aberg four-stroke MX bike. Just $2 nets you the catalog from **Hallman Racing Inc., Dept. MC, 1300 Hill St., El Cajon, CA 92020 or Hallman East, Dept. MC, 440 Beldon Ave., Addison, IL 60101.**



HELMET HOUSE has completed their 1979 catalog, chock-full of the latest hot items. A full line of helmets and accessories includes Bell, Shoei, Hustler, Paulson, Scott, Hydron and many more. They've got exhaust systems, winter and summer apparel, touring accessories, suspension packages, windshields; you name it, they've got it. This catalog displays top-of-the-line goods for both the off-road and street rider. It comes complete with ordering blanks, part numbers and retail prices. Send $2 for catalog to **Helmet House, Dept. MC, 2115 Colorado Ave., Santa Monica, CA 90404.**

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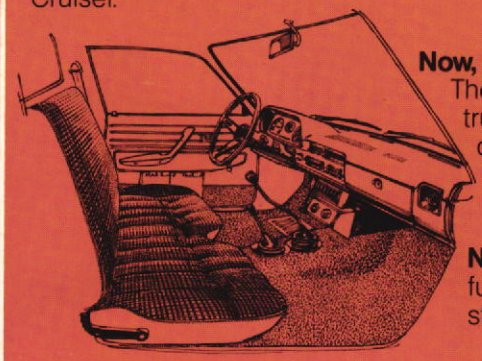

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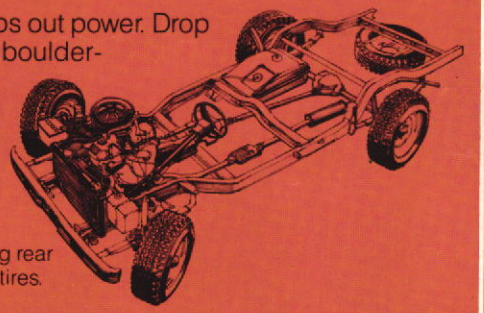

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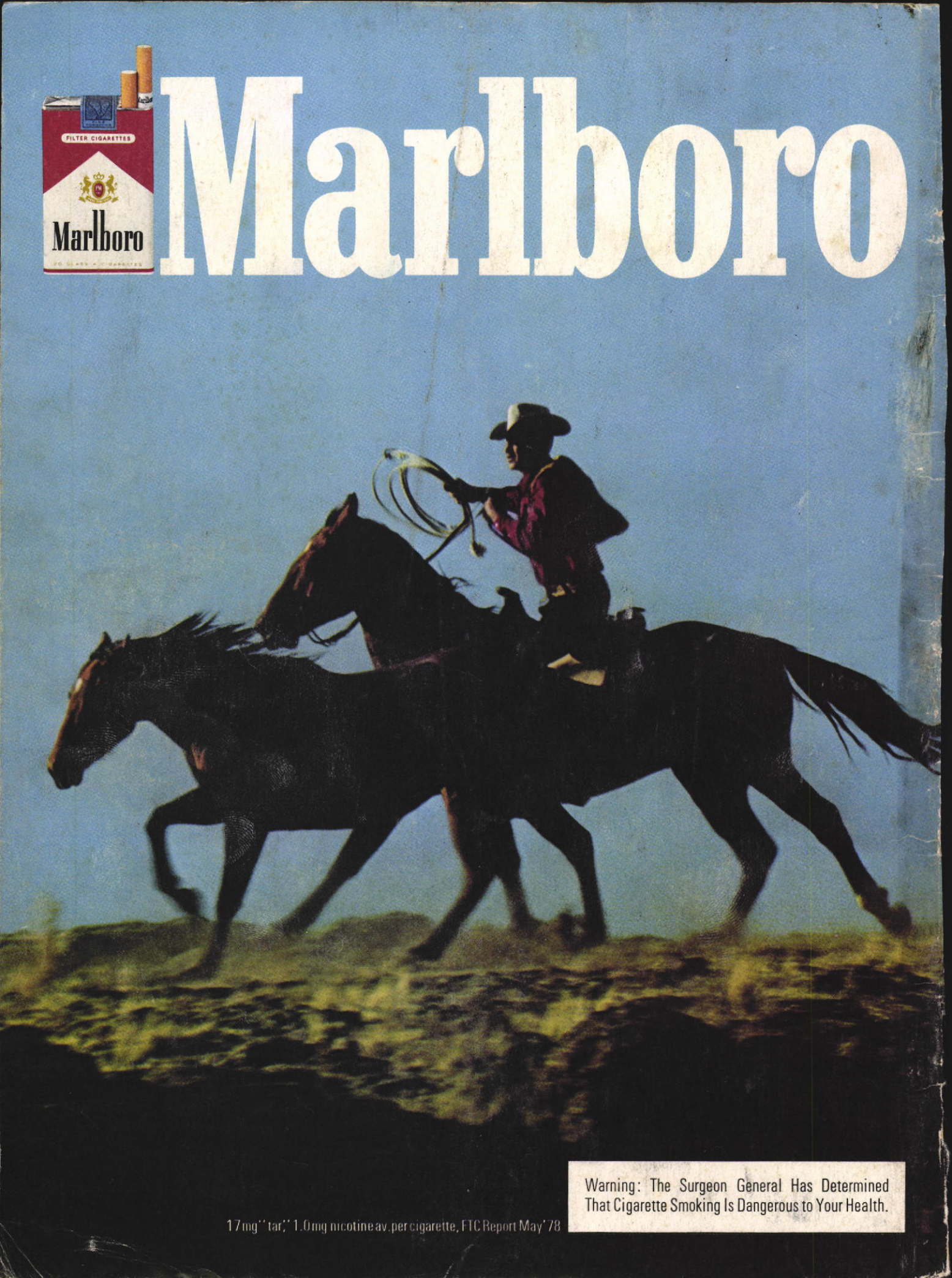
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